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NOTES ON THE ETIOLOGY AND TREATMENT OF CATARRH OF THE NOSE AND PHARYNX.

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The most common symptom complained of by patients visiting the rhinologist is catarrh of the nose and throat. Very often the information is volunteered, and often it is the only symptom complained of. My object in bringing the subject before you to-night is to show how many-sided this symptom is and to emphasize the variety of causes at the back of it, causes which have to be accurately diagnosed before treatment should be applied. The nasal and pharyngeal mucosa, pierced as it is by myriads of submucous glands, 150 sometimes opening to the square centimetre, reacts most vigorously to any irritant, mechanical, chemical or thermal, and the mucus is poured out in defence of the membrane, just as a slug pours out slime to protect itself against irritating particles.

The propensity of the glands to exude mucus is a fundamental factor in catarrh of the nose and throat.

In normal conditions there is a steady flow of mucus kept on the move by the ciliated epithelium, which lines the upper respiratory tract from the anterior nares to the level of the soft palate in the naso-pharynx. This maintains the normal moisture of the membranes, and gives rise to no subjective sensation.

In considering the nasal cavities we must take into account the adneftal cavities and their openings into the nose. Thus the maxillary, frontal, and anterior ethmoidal sinuses, opening into the middle meatus, and the superior ethmoidal, and sphenoidal, opening into the superior meatus, must be noticed. Into the pharynx there are seven openings, through any of which secretions or irritants may find their way. These are the two choanal, the two eustachian tubes, the mouth, the larynx, and the œsophagus. If we take the limits of the pharynx to extend from the vault of the skull to the sixth cervical vertebra, its vertical height may be assumed to be five inches. The cavity of the naso-pharynx alone to the level of the soft palate has only an average capacity of 14 c.cm., and a moderate-sized walnut would fill it and partially block the choanal and eustachian openings. Below the level of the soft palate the ciliated epithelium is replaced by stratified, non-ciliated epithelium. This explains why there is a tendency for secretions to work down and collect on the back of the oro-pharynx. Normally, there is a steady stream of mucus secretion, mixed with leucocytes (from the adenoid tissue, which is abundant in the naso-pharynx), being worked back from all the sinuses into the nose, from the nose into the naso-pharynx, and thence into the oro-pharynx, where it is passed on by the ordinary processes of deglutition. When irritants or disease processes, whether local or re-

mote, affect the mucosa, a change in the quantity or quality, or both, of the mucus secretion occurs, and the so-called chronic nasal catarrh results. The change in the quality of the secretion may also influence its behaviour towards micro-organisms, for, while, owing to the abundance of healthy leucocytes derived from the adenoid tissue, the normal secretion is strongly defensive against bacteria, a pathological secretion loses this quality, and may even favour the growth of inspired organisms.

I have attempted to frame a table, giving the common causes which contribute to catarrh of the nose and throat. The arrangement is as follows:—

Descending	{ Obstructive	{ Pharyngeal
	{ Sinusitic	
	{ Aural	
	{ Tonsillar	
	{ Bursal	
Oral	{ Tonsillar	{ Lingual
	{ Dental	{ Faucial
	{ Coecal	
	{ Gastric	
Ascending	{ Œsophageal	
	{ Pulmonary	
	{ Laryngeal	
Thermal		
Mechanical		
Trade		
Chemical		
Parasitic		
Congestive	{ Cardiac,	
	{ Aneurysm,	
	{ etc.	
Auto Toxæmic	{ Gout,	
	{ Constipation,	
	{ etc.	
Nephritis		
Myxœdema		

I.—Descending.

(1) Obstructive.

The obstructions in the nose, apart from neoplasms, may be classed under the headings of deviations and hypertrophies.

The septum may be deviated, its bony base may be expanded, or it may present outgrowths of bone or cartilage.

The lateral walls of the nose may present hypertrophied inferior turbinates, with moriform posterior ends blocking the choanae, or the middle turbinate may be inflated by the development in it of an ethmoidal cell, in which case it may be incarcerated, blocking all ventilation in the roof of the nose and interfering with free drainage from maxillary, frontal, or ethmoidal sinuses. This is by no means a rare condition, and has for its accompanying symptoms eye-ache and frontal headache, and when there is retention and incarceration, hay fever and asthma.

Nasal obstruction acts in two ways: (1) By preventing the free movement of the secretion, and its retention at various points, and (2) interfering with nasal respiration, causing mouth breathing, with its secondary effects on the mucosa of the mouth and

pharynx. In either case, the mucosa rebels, and secretion is increased, exhibiting nasal catarrh in its simplest form. This is often increased still more when the presence of moriform posterior ends, giving rise to a subjective sensation at the back of the nose, simulating collections of mucus, leads the patient to make violent efforts to clear them. Hyperæmia and congestion of the naso-pharynx intervene, with great increase of secretion, sometimes streaked with blood. The treatment of this variety is surgical. To-day, the modern septum resection, amputation of the anterior half of the middle turbinate, or removal of the posterior ends with the cold wire snare, removes the various obstructions, and with them the causes of catarrh.

(2) Sinusitis.

A long paper might be written on chronic sinus infections and catarrh of the upper air passages.

In a general way we may say that the maxillary, frontal, ethmoidal, and sphenoidal sinuses may produce chronic discharges. This is chiefly due to some obstruction in drainage, which leads to changes in the lining mucosa remaining after some acute infection. The maxillary sinus, too, may be chronically infected from tooth abscesses. The ethmoidal, especially, may be complicated by polypoid proliferation of the mucosa, adding obstruction to secretion. In any case, there is increased secretion, purulent, mucopurulent, or mucus, some running forward, some backward by day, all backward by night.

When we see a tenacious, jelly-like patch of mucus on the posterior wall of the naso-pharynx, we know that a sphenoidal sinus is secreting, and on looking up to the superior meatus, a fine streak may often be seen issuing from the choana. The secretion from this source may be only trifling, but from its tenacious consistence it gives rise to well-marked subjective discomfort. On the other hand, one or both sinuses may discharge purulent material, which sets on the wall like tallow, and resists all ordinary respiratory attempts at removal. Mild degrees of sphenoidal sinus catarrh are common, and I wish to draw attention to the fact, as it subsides speedily on simple washing out. In the severer forms, resection of the anterior wall and long-continued treatment are necessary. Secretions from the other sinuses must be treated on general principles, free drainage and ventilation being the fundamental points.

(3) Aurals.

Rarer than the last is secretion coming from an infected eustachian tube. A disagreeable odour and feeling of intense irritation are the symptoms complained of. Secretion may at times be seen issuing from the eustachian opening. Infections of the eustachian tube are difficult to treat. There is always a defective tympanic membrane, and I have found prolonged ear baths of tincture of iodine the most effective, as the fluid works its way down the tube and is often felt in the throat. To carry out this manipulation properly, it is of course necessary to anaesthetize locally, to wash out *per meatum* and perhaps *per tubam*, and to inflate with the air douche to free the tube.

(4) Tonsillar.

In children the pharyngeal tonsil is the commonest cause of a catarrhal secretion in the throat, and in adults, when in a shrunken condition, it may give trouble. The scattered patches of adenoid tissue here and in the adjacent Rosenmüller's fossæ may pour out excessive secretion. This class of throat is very touchy as regards even slight irritation, and the best treatment is to anaesthetize the jelly-like patches locally, and to touch them singly and gently with trichlor-acetic acid. This gives great relief, but it is not uncommon to find fresh patches after a few months, especially along the edge of the superior constrictor or tubo-pharyngeus muscle.

(5) Bursal.

Mucopus may be discharged from the opening of the so-called *bursa pharyngis* occupying the site of the pharyngeal tonsil. This is rare, and shows itself as a localized, adherent, greenish-yellow patch, which is dislodged every few days. It is difficult to treat; slitting up the bursa and chemical cauterization frequently fail to relieve.

B.—Oral.

(1), (2) and (3) Tonsillar, Dental and Coecal.

Contributing causes in the mouth and neighbourhood may be classified as tonsillar, dental, and coecal.

The faucial tonsils are important factors in catarrhal conditions of the throat, and when chronically infected exercise a pernicious influence on all parts of the upper respiratory tract. The tonsils may be discharging a septic exudate into the pharynx, and yet on examination nothing may be seen on the surface. On pressure from below upwards, however, a creamy purulent secretion makes its appearance from the crypts. This has a distinctly fetid odour of which the patients complain, which they often refer to some part of the nose. They also complain of a bad taste and irritating feeling in the throat. The patients "clear their throats" at short intervals. There is a tickling cough often troublesome on going to bed, a cough which is hard to control, and may lead to a fit of retching, after which the patient can get to sleep. The tonsils in this condition may, but need not be, hypertrophied; on the contrary they are often small and sunken. The anterior pillar of the fauces may be adherent along the whole length of the tonsil, covering the crypts. The latter open, under these conditions, into a pocket with an aperture at the top, from which pus exudes on pressure. Pus may also exude from a retro-tonsillar pocket, or from one leading up into the soft palate. The latter conditions are favourable for the development of peritonsillar abscess or quinsy. The tonsillar secretion is rich in pathogenic and saprophytic organisms, and acute attacks of tonsillitis are set up when the resistance of the patient is deficient. From this focus the organisms flood the pharynx, and, keeping the adenoid tissue in a constant state of defensive irritation, lead to an increase of catarrhal secretion.

As a palliative treatment, cleaning out and dilating the crypts, and cauterizing each one separately with anhydrous trichlor-acetic acid is useful in mild

cases, but in order to get rid of the infection completely enucleation is necessary. This is particularly the case where the anterior pillar is adherent, as simple separation is sure to be annulled by new adhesion and a recurrence of the condition.

The lingual tonsil contributes to catarrh less often from infection of the follicles than by the frequent dilation of its vessels (sometimes simulating a venous angioma) and secondary increase of secretion. The subjective symptom is a feeling of fullness at the base of the tongue, and a frequent desire to hawk up the secretion. A deep infected *foramen cecum* again may be a source of trouble, discharging as it does an offensive muco-pus, the odour being perceived both by the patient and by those surrounding him. This is a most difficult thing to treat, and fortunately it is rare.

Charles Mayo says that less than 20% of people have healthy mouths. Though spoken of the people of the United States, this assertion is probably true for Australia. To cope with the bacteria of an infected mouth is sufficient to keep the adenoid tissue of the pharynx constantly working overtime, and it is no wonder that it sometimes breaks down under the strain, and local and general infection results. In a paper communicated a short time ago to the Dental Graduates' Society, I reviewed some recent investigations into the connexion between mouth infections and general disease. The action of the *streptococcus viridans haemolyticus* in producing joint and heart inflammation seems to have been proved.

My reason for mentioning dental conditions is that the pharynx and nose are never healthy in the presence of a septic mouth, and more or less catarrh is always present.

C.—Ascending.

The two lowest openings into the pharynx are the oesophageal and laryngeal.

While the swallowing of secretions from the upper air passages may give rise to gastric disturbances, surgical dyspepsia, and morning vomiting, the stomach may react on the pharynx, and keep up a constant state of irritation, catarrh ascending the oesophagus with eructation and pyrosis. Atonic dyspepsia with dilated stomach is the most fruitful cause of this, and lavage of the stomach, combined with dieting, has given the best results.

The most marked symptom in this condition is the excessive secretion after food, with a constant desire to hawk it up, as swallowing it gives rise to a feeling of nausea, probably from swallowing air.

The secretions of laryngeal and bronchial catarrh also cause trouble in the pharynx, especially in the tubercular forms, but more particularly where there is profuse secretion from bronchial dilatation, bronchiectasis or early laryngeal tuberculosis.

D.—Thermal.

The practice of drinking fluids so hot that the mucous glands are obliged to object by pouring out secretion for the defence of the membrane, gives rise to a common form of pharyngitis. Those who are addicted to much hot tea complain of phlegm in the throat, which disappears largely when cold milk and water is substituted. It is not uncommon to see

people taking tea or coffee of a temperature between 180° and 200° F., which would be painful to the finger tips, regardless of its effects on the mouth and teeth. While the female world is the most frequent sufferer from hot fluids, the male, by persistently turning his mouth into a receiver for the products of the destructive distillation of tobacco suffers at once from thermal and chemical irritation. Pharyngeal catarrh is nearly always present in smokers, sometimes in a high degree, and the cigarette fiend may be known by his morning cough and his noisy attempts to try and get rid of his own swollen mucous membrane. The excessive pipe-smoker is known by his cooked, hard palate, and it is generally impossible to do more than palliate naso-pharyngeal catarrh, if tobacco be persisted in. The best one can do is to order a soothing oily spray, e.g., chloretone inhalant diluted with liquid paraffin, which, used night and morning, acts as a sedative and protective to the mucosa.

E.—Mechanical.

People who travel through the air at a great speed, motorists, and especially motor cyclists, complain of tumidity of the soft parts of the nose, with obstruction and cough. This is probably caused to a large extent by the forced inspiration of small particles of dust, etc., and a simple normal saline douche is the most rational and effectual way of getting rid of the discomfort.

Then there is a number of trades where fine particles are inspired, and irritate the nose and throat. Carpenters are often particularly susceptible to red pine dust. Plasterers, bakers, barbers all inspire fine and often irritating particles, which cause irritation of the mucous glands. People working in softgoods shops do the same. In these a saline douche once or twice a week gives great comfort, and relieves the ciliary epithelium a great deal.

F.—Chemical.

Are we to regard alcohol as a chemical irritant to the throat? People who gargle their throats with whisky certainly suffer from hyperæmia of the mucosa, extending all the way from the nose to the stomach, and colouring both. It is probable that the increased secretion is due to the excessive blood supply to the glands rather than an attempt to excrete the poison.

G.—Parasitic.

Thread worms occasionally find their way into the nose and pharynx, and cause severe catarrhal reaction; the patients are generally children or thin, anæmic women, who complain of an intolerable itch and tickling in the nose. Santonin internally, or better, thymol, with *ung. hydrag. nit.*, diluted with paraffin, as a local application, is the appropriate treatment, care being taken to prevent reinfection.

H.—Congestive.

The congestion of the mucosa, met with in cardiac valvular conditions, aneurysm, etc., gives rise to great discomfort. I have found this worst in aortic regurgitation, especially when the patient is lying down. There is free secretion, but the subjective sensation is due to the engorged tissues, and no

amount of coughing or straining gives relief. On the contrary, it may give rise to small hæmorrhages and increased discomfort. Local treatment is useless in such cases, and the causative complaint must be attacked.

In conclusion, many complaints are attended with excessive secretion of the upper air passages, perhaps because there is an attempt to excrete some retained or toxic agent through the mucosa. Gout, chronic constipation, and nephritis and myxœdema may be cited as instances. The tumid and hyperæmic condition of the mucosa in the gouty is well known, and gouty rhinitis and pharyngitis are terms found in old text books.

The hyperæmic and sticky pharynx of chronic constipation fades away under a strict diet of apenta and euonymus, best given before dinner in the evening, and in the other conditions mentioned the treatment is that of the general disease.

In this short paper I have endeavoured to discuss the subject from the standpoint of practice, and from the conditions found here in our own community, without reference to books or other literature. The symptom so universally complained of may, in its mildest form, be a hyper-secretion due to our dry climate, which disappears on going to sea, or it may be only the indication of some obscure infection in the respiratory tract, or finally, it may be due to the excretion of an irritant in some toxæmias.

THE COOLIDGE X-RAY TUBE.¹

By Charles Ayres, M.B., M.S. (Ed.), B.A. (Syd.),
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X-Ray Department, St. Vincent's Hospital, etc.

Since the scientific discovery of X-rays by Röntgen, of Würzburg, on April 30, 1895, there has been no more important advance in the X-ray world than the invention of the Coolidge tube. As you all know, Professor Röntgen was experimenting in a dark room with a Crooke's tube, which was entirely covered with black paper. On a bench near by lay some platino-cyanide of barium. On passing an electric current through the tube, he observed that the platino-cyanide of barium became fluorescent. As light from the tube was shut in by the black paper, he at once grasped the marvellous fact that some ray hitherto unknown was passing from the tube, and he applied the now familiar term "X"-ray to this hitherto undiscovered phenomenon. It was found, on further experiment, that X-rays penetrated objects which were opaque to light rays, and that the degree of penetration was proportional to the density of the object. Also that any solid substance of sufficient density, placed in the path of the rays from the tube, was shown as a shadow on a platino-cyanide of barium screen.

The early tubes were more or less ovoid in shape, and only contained a cathode. The next great improvement was introduced by Professor Jackson, of King's College, London, who altered the tube to

its present-day shape, and placed the anode, otherwise called the anticathode or target, opposite the cathode. He made the latter concave, so as to focus the cathode rays on to a point on the anticathode. The X-ray tube was not further modified in any important detail up to 1914, when Coolidge made his great discovery of how to regulate the penetration of the tube at will. Prior to 1914 the vacuum of the tube had to be regulated either by means of a small secondary tube and regulator wire, or by means of Bauer's air regulator, by which air may be pumped into the tube and the partial vacuum lowered. This was the best method till the genius of America discovered an entirely new way of regulating the intensity and penetration of X-rays, and it is the new X-ray tube, the Coolidge, that I wish to bring forward and demonstrate to you to-night. In doing so, I will endeavour to blend theory with practice.

The Coolidge X-ray tube was invented by W. D. Coolidge, D.Sc., of Schenectady, New York, after a considerable period of persistent and patient endeavour to meet the requirements of radiographers the world over for a tube that would stand a very heavy current and one that would allow of a practically constant vacuum for any length of time.

The tube itself, as you see, is an ordinary looking one, with a diameter of 18 cm. Its vacuum is 1,000 times greater than that of the ordinary tube, in which the pressure is about $\frac{1}{1000000}$ of the atmospheric pressure.

The cathode in the Coolidge tube consists of a flat, spiral filament of tungsten, surrounded by a sleeve of molybdenum. In the ordinary tube the cathode is a concave piece of aluminium, and is purposely made concave to focus the cathode rays on to the anticathode, whereas in the Coolidge tube the sleeve of molybdenum focusses the rays. The anode, anticathode or target in each is composed of tungsten (or may be of platinum or other metal) in the ordinary tube. In the Coolidge tube it is very massive, and resembles a truncated bullet; it is constructed to withstand a great bombardment and high temperature without melting.

When the terminals from the coil are connected with the ends of the ordinary tube and a current sent through it, positive ions within the tube bombard the cathode, and a stream of electrons, *i.e.*, negatively charged particles, shoot off from the cathode and constitute the cathode rays. These rays are focussed on to the target, and it is from the target that the X-rays spring and travel in straight lines. The cathode rays consist of a stream of electrons, or, in other words, of negatively charged particles, travelling at the rate of 20,000 miles a second. They cannot be deflected, refracted, reflected from a mirror, or concentrated by a lens. They penetrate substances opaque to light rays, cause fluorescence in certain substances, penetrate objects in proportion to their density, and leave an impression on a photographic plate.

The X-rays, according to Sir G. Stokes, are due to pulsations in the luminiferous ether starting from the points of impact of the cathode particles on the anticathode. They are not continuous vibrations

¹ Read at a meeting of the New South Wales Branch of the British Medical Association on September 10, 1915.

like those of ordinary light, but are extremely short and isolated, and travel at the rate of 185,000 miles per second. The energy of X-rays is proportional to the energy of the cathode rays producing them. Bragg, on the other hand, says that the X-rays consist of material particles travelling at a very high rate of speed. When the cathode rays strike the anticathode, in addition to the production of X-rays, heat and motion are liberated and secondary cathode rays are reflected from it. They bombard the glass and set up fluorescence and much heat. At the same time, secondary X-rays are sent out from the glass bulb itself. It is these rays that have a tendency to blur portions of the radiograms, hence a diaphragm is required for the purpose of cutting them off as much as possible. The heat which is produced at the target in the ordinary tube is the cause, if continued for any length of time, of a lowering of the vacuum, because gas is expressed from the heated metal.

Now when, as is generally the case, an induction coil is employed as the transformer, an interrupter is used to break the current, and an electric charge is sent through the primary of the coil, a current is induced in the secondary coil at break in one direction and a current at make in the opposite direction. It is the current at break that is wanted and made use of. The current at make is of less power and is not used. It is termed the reverse current, and tends to cause the tube to become hard and to blur the image on the screen and plate; hence a valve tube must be inserted in the secondary to cut this reverse current out.

Now take the Coolidge tube, connect the wires from the terminals of the coil to the end of the tube and turn on the current. What happens? Owing to the fact that the tube and its terminals are absolutely freed from gas, there are no positive ions to bombard the cathode, consequently there are no electrons, and the current will not pass through the tube, but sparks across the spark gap. The electrons constituting the cathode stream must be produced in some other way. A current from a 12-volt storage battery, which must be insulated from the ground, is used to heat the cathode. The electric current can then pass through the tube. The cathode stream is focussed by the sleeve of molybdenum on to the anticathode, and X-rays produced, as already described. Secondary cathode rays are not reflected on to the glass bulb, and, consequently, there is no fluorescence, no marked heating, nor any production of secondary X-rays. For this reason, there is no need of a diaphragm, and as the tube rectifies itself and allows current to pass only in one direction, a valve tube is unnecessary.

In the Coolidge tube the intensity and penetration of the rays are under the complete control of the operator. Either can be increased or decreased instantly, independently of the other. The penetration of the rays depends on the temperature of the cathode, and this is regulated by the rheostat of the storage battery. The higher the temperature the less the resistance and the lower the penetration. In the ordinary tube penetration depends entirely on the degree of vacuum, but this is difficult to ad-

just and hard to sustain. The Coolidge tube is made with the focal spot on the target large, medium, or small and sharp. The size of the focal spot depends on the distance between the spiral filament and the front free end of the molybdenum sleeve surrounding the spiral filament, *i.e.*, the focus becomes sharper the more the molybdenum sleeve is drawn over the cathode. In the Coolidge tube the focal spot is absolutely fixed, so that the definition in a radiogram is better than that obtained with an ordinary tube in which the wandering of the focal spot is often responsible for blurring of the image.

The permissible input of energy through the tube is limited by the size of the focal spot on the target. With a sharp focus more than a certain input of energy will cause a drop in the resistance of the tube, because the tungsten melts at the focal spot and volatilizes.

A tube with a large focus is best for therapeutic work, because it will carry the largest possible input of energy, and will permit of the use of adequate filters for protection of the skin, especially in deep therapy. For radiographic and fluoroscopic work, the tube with the sharper focus is best, because of the better definition.

The intense output of the Coolidge tube is capable of producing rays which are more like the gamma radium rays than the rays of an ordinary tube.

The life of the Coolidge tube is estimated by Coolidge to be at least 1,000 hours of constant running.

It is very valuable in fluoroscopic work, for it can be run for any desired length of time. Therein lurks a greater danger for the operator and patient, unless it is manipulated with great care.

It will be very valuable for deep therapy.

It is easy to restore the exact condition of the tube as often as required, whereas with the ordinary tube it is very difficult to reproduce the same conditions twice.

I have obtained a skiagram of the kidney region in three seconds. I find that the tube works better with the Wehnelt break, and that a valve tube had better be in circuit when the biggest currents are employed. I can turn Sabouraud's pastille in three minutes, using six milliampères. This is a great advantage, and will render X-ray treatment of ringworm, sycoosis, rodent ulcer, keloid and other skin conditions much easier.

It is said that with the full capacity of the new tube serious and even fatal burns may be caused in much less than a minute. When the announcement of the most remarkable discovery of its kind in the present age was made, a note of warning was added in connexion with its greater danger and the need for the greatest care.

Reports of Cases.

LOBAR PNEUMONIA: PULMONARY ABSCESS.

By C. V. Hamilton Fairley, M.B. (Melb.),
House Surgeon, Melbourne Hospital.

R.H., male, aet. 23 years, was admitted to the Melbourne Hospital on June 1, 1915. On the previous day he quite suddenly got a fit of coughing, with blood-stained sputum.

Several severe rigors ensued during that day. On June 1 dyspnoea, coughing, and vomiting were marked.

On admission the temperature was 103.6°, the pulse-rate was 108, and the respirations 36. The tongue was furred. The blood pressure measured 120 mm. Hg.; urine, sp. Gr. 1030; acid; no albumin; no sugar. No abnormal signs were detected in the heart. The right lung was normal, except for a diminished vesicular murmur. On the left side the percussion note was dull to the 3rd interspace anteriorly, and to the 4th interspace posteriorly. There was a diminished vesicular murmur throughout, especially over lower left lobe posteriorly. Faint tubular breathing on direct auscultation was heard, while the vocal resonance was increased. Friction was present in the left axilla. For eight days the clinical picture was that of a typical lobar pneumonia, the pulse respiration ratio being 5:2. Thereafter a swinging intermittent type of fever ensued.

On the ninth day the patient developed marked aphonia.

On the tenth day copious pus-like sputum, with extreme foetor, was coughed up.

On the thirteenth day the following signs were noted in the left side of the chest. Inspection showed general diminution of the respiratory excursion. Anteriorly there was dullness as high as the level of the second rib, with bronchial breathing. In the axillary zone dullness on percussion, amphoric breath sounds, pectoriloquy, and increased vocal resonance were noticed. Posteriorly there was dullness over whole lung, bronchophony, and scattered crepitations. The aphonia had cleared up by this time. The intermittent fever continued, though the quantity of sputum lessened somewhat. The pleural cavity was punctured several times, but no fluid was withdrawn.

On the twenty-third day of illness an X-ray examination revealed a diffuse consolidation of the whole of left lung, slightly less marked at the apex and base, with the maximum opacity in the middle third. The apex beat was never displaced, and pulmonary signs continued. Examination of sputum for tubercle bacilli was thrice negative. No indications of any hydatid membrane, scolices, etc., were detected at any time.

On the thirty-first day of illness a solution of menthol and guaiaacol, in olive oil (5vi.), was injected into the lung by Dr. Wright. The injections did not cause any distress.

On the thirty-fourth day I explored the left lung with a large calibre three-inch needle, attached to a record syringe. When the needle was inserted through the 4th interspace, in the mid axillary line, 1¼ pint of intensely foetid, thick, dark brown material was aspirated. On standing, this separated into three layers; an upper frothy zone, an intermediate light brown zone, and a lower dark stercoraceous-like layer. On microscopical examination it was found to contain pus cells and elastic films. On culture *staphylococcus aureus* was grown. A vaccine was prepared. At the end of the aspirations the patient became somewhat dyspnoeic and cyanosed, and slight restlessness appeared. The pulse became rapid. In the next half-hour he coughed up 3 vi. of blood-stained sputum. Within two hours all distressing symptoms had subsided. In the next four days the temperature, pulse and respirations became normal. Mr. Langlands saw the patient in consultation with Dr. Boyd at this stage, and decided in favour of the conservative policy of awaiting further development before re-section of a rib and drainage.

Convalescence set in within a short time, and was rapid. The sputum became progressively less, and did not become foetid again. The appetite returned, and weight was gained readily. After the temperature had been normal for three weeks, the patient was discharged, 2½ months from the day of admission. The only evidence of a previous pulmonary involvement was some diminished vesicular murmur and relative dullness at the left base posteriorly.

I am indebted to Dr. W. R. Boyd, under whose care this patient was, for permission to publish the record of this case.

Reviews.

MEDICINE.

The title of Sir Robert Saundby's latest work¹ *Urgent Symptoms in Medical Practice*, is somewhat misleading. On perusal it is found that in many instances diseases,

which by no stretch of imagination can be regarded as urgent, are discussed more or less completely; for instance, acne vulgaris, albinism, and alkaptonuria are considered in the first few pages. The work is arranged on the alphabetical plan, treats of medical diseases for the most part, and occupies a position somewhere between a dictionary of medical terms and an encyclopædia. Most diseases of the skin are covered, and in the majority of cases the treatment is given. The therapeutics of other diseases is not infrequently somewhat old-fashioned. To give two examples out of many, no mention is made of the use of emetine in amœbic dysentery, whilst no reference can be found to the value of subcutaneous saline injections in cholera. In some cases a definition of a symptom or disease is given, and no treatment is suggested.

MEDITATIONS ON MEDICAL TOPICS.

Dr. Alex. Lewers has collected his occasional writings in various medical and other journals, and has published them in a single volume². The range of the topics which have been selected for commentary is wide. Only a small proportion of them deal with scientific medical subjects. The philosophical insight of the author pervades each of his meditations. A wholesome detachment from professional prejudices imparts freshness to his impressions and to his way of handling a subject. Even when he discusses the time-worn theorems of medical writers, originality of outlook serves to enliven his thoughts, and to give to them a new interest. It is necessary at times to leave the regions of detailed study of phenomena, and to view from above the multitudinous facts, in order that the general characteristics of what lies below may be seen in their proper perspective. A clear understanding of the fundamental principles of medicine, coupled to capacity to apply these laws correctly, makes the path of the medical practitioner easy. The articles number fifty-seven, all of short length. Most of them breathe a healthy scepticism, which is needful to counteract the self-satisfied contentment of so many writings of the present day. Although these articles may be designated as fragments, they possess somewhat the form of a lyric in prose. Each one deals with a single topic, in which felicity of language conveys charm to the style. Special commendation may be accorded to the pages dealing with "the doctor," "the road to old age," "the new world which is old," "doctors in fiction," and "the ideal holiday." It is rare in this country for the physician to enter the realms of literature, and Dr. Lewers must be congratulated on providing his colleagues with a volume with which they may pass some hours of leisure with profit and pleasure.

Personal.

It has been found that information concerning individual members of the British Medical Association in Australia, collected from sources other than direct communication from the member concerned, or notification through the Honorary Secretaries of the Branches, is unreliable, and often erroneous. The object of the Personal column is to inform members of the movements of their friends. The Editor will be greatly indebted to members if they will notify him directly, or through the Honorary Secretary of their Branch, of their movements, more especially in regard to a change of address, or the fact of starting practice, leaving the Commonwealth on an extended holiday, returning to practice, and resignation of appointments. The collaboration of members in this way will render the Personal column a reliable source of information and of interest to readers. Notices should reach Sydney on Monday morning to ensure publication in the Journal of the same week.

Dr. and Mrs. J. C. Douglas have left Adamstown, New South Wales, and propose to enlist for service abroad. Dr. Greaves will act as Dr. Douglas's locum tenens during his absence.

¹*Urgent Symptoms in Medical Practice*, by Robert Saundby, M.D., R.A.M.C. (T.) London, 1915. Edward Arnold; demi 8vo.; pp. 437. Price, 7s. 6d.

²*Medicine and Meditation: Occasional Writing*, by Alex. Lewers, M.R.C.S., L.R.C.P., D.P.H., 1915. Melbourne: Ford & Son; Demi 8vo., pp. 127. Price, 3s. 6d.

The Medical Journal of Australia.

SATURDAY, SEPTEMBER 25, 1915.

Anti-typhoid Inoculation.

The military authorities at the outbreak of war determined to have recourse to anti-typhoid inoculation or vaccination of all troops in the hope that the incidence of enteric fever might be reduced to a minimum. The experience of the South African war and of the Manchurian campaign justified this action, and served as an immediate reply to those bigoted persons who are known as anti-vaccinators. At the present time, it appears as if the Defence Department in the Commonwealth and the War Office in the mother country are seeking for exact information as to the value of these inoculations up to the present time. Last week we published an abstract from a report of General Williams, the Director of Medical Services in command of the Medical Corps of the Australian Imperial Force, to the High Commissioner of the Commonwealth. In this report the writer draws attention to the fact that there had only been three cases of disease clinically like enteric fever among the Australian troops. In the same issue we published an *ex cathedra* statement made by the Director-General of Public Health in New South Wales and his medical staff concerning the value of prophylactic inoculation. This statement is a cautiously expressed and excellent opinion based on theoretical considerations. In addition it contains one or two facts of importance. To these we shall return later.

In a recent issue of the *Journal of the American Medical Association* Major William Lyster gives a clear and highly significant record of the effect of anti-typhoid inoculation in the United States Army. The result of this practical experience must take precedence over theoretical considerations. The story of enteric fever in the army of the United States may be told in a few words. In 1908 the strength of the army was 74,692, and this number has increased up to 92,877 in 1914. From 1908 to 1911 (September 30) preventive inoculation was voluntary. Since the later date it has been practised as a compulsory measure. At first few men availed

themselves of the advantages. During the first nine months of 1909, 830 men were vaccinated and 621 received three doses. The number of cases of enteric fever during the period was 282. In 1910, 16,093 men were vaccinated, of whom 11,932 received three doses. The number of attacks of enteric fever diminished to 198. From January 1, 1911, to June 30 of the same year, 27,720 men were vaccinated; of these 25,779 received three doses, and 70 cases of enteric fever occurred. From July 1, 1911, to June 30, 1912, 40,057 men received three doses of vaccine. The number of cases of enteric fever sank to 27. From July 1, 1912, to June 30, 1913, 25,086 men were vaccinated, all receiving three doses. There were 4 cases of enteric fever in the whole army. From July 1, 1913, to June 30, 1914, 35,902 men were inoculated, all receiving three doses. The number of cases of enteric fever was 7. In order to assay the true significance of these figures, it is necessary to have regard to the proportion of the men who received an adequate vaccination in the years under review. At the end of 1911, 87.8% of the men had been protected. The remainder consisted of men and officers over 45 years of age, or those who had had enteric fever previously. Major Lyster admits that a few men may have escaped inoculation, and indeed proves this by the record of the two of the eleven men who were attacked by the disease in 1913 and 1914. Both these men had been in the Army for two years, and in some way had been left out of count when the order became general. But he claims that omissions of this kind must have been extremely rare. In the case of the troops leaving Australia for Egypt and Europe, it is admitted that a certain number either were not vaccinated at all or only received one dose of vaccine. In the case of the United States' army, the difficulty of applying 675,000 doses in various parts of the world must have been considerable, while in our own case there should have been no difficulty in subjecting every soldier leaving the Commonwealth to a prophylactic injection.

The average number of cases of enteric fever among American troops during the years 1900 and 1909 was 351. In 1910, when vaccination was being introduced, it was 198. Two years later the number had been reduced to 27, and three years later to 4. No marked hygienic revolution had occurred which

might account for this extraordinary reduction in the incidence of the disease. More than that, of the eleven patients affected with enteric fever during the period from July, 1912, to July, 1914, only two had received three doses of vaccine.

These facts teach us one lesson of the greatest importance. Were the community vaccinated efficiently throughout the length and breadth of the land, enteric fever could be stamped out in the course of a few years. The protection afforded by anti-typhoid inoculation is apparently not less powerful than that afforded by vaccination against small-pox. Efficient vaccination and revaccination stamped small-pox out in the German Empire in spite of the fact that the same legislative measures did not apply in the countries directly bordering on that country. It is unnecessary for the prophylactic to be absolute to achieve complete success. The only essential is compulsion, since every voluntary effort will only offer protection to a portion of the community.

HYGIENE FOR SOLDIERS.

In this issue will be found an account of the inaugural meeting of the Section of Public Health and Kindred Sciences of the Royal Society of New South Wales. This section has for its primary object the advancement of hygienic knowledge, and it was singularly appropriate that the subject for discussion for the first meeting was military hygiene. Those who have followed the march of events in connexion with public health matters during the past quarter of a century have been struck by the victory of common sense over mystery. Formerly, the prevention of disease and the preservation of health were matters which only the enlightened members of the Church and of the profession of physicians could grasp. Scientific research has advanced rapidly within recent years by the discovery of great biological, chemical and physiological facts, but almost as much progress has been made by the recognition of simple truths, which everyone can understand. Not many years ago a sense of false prudery forbade the daily press from dealing openly and freely with sanitary matters, and with subjects like the prevention of venereal diseases. Men closed their eyes to blots on civilization

and refused to attack problems, which might be regarded as essentially human.

With the increase of knowledge and the introduction of frequent congresses of scientists the public has awakened to the fact that the preservation of health is a matter with which each man has concern. In response to a public demand, reports of congresses, records of scientific investigations, and the results of observation have appeared in the daily newspapers for the information and education of the public.

The principles which underlie modern hygiene can be expressed in language intelligible to the average man, and if shorn of redundant technical terms, are not so complicated but that everyone can take a keen interest in them. Attempts have been made in many places to popularize hygiene, and to teach men and women what factors favour longevity and physiological activity, and what factors contribute to the destruction of tissue and to the deterioration of organs. The effect of environment, the need for sanitary cleanliness, and danger lurking in external, natural and artificial phenomena have been described in various ways to the members of the community. In view of the success attending these sporadic efforts to teach people to know themselves and to understand how individual and mass health may be safeguarded, little wonder need be felt at the suggestion sketched by Sir Thomas Anderson Stuart, that organized lectures on personal hygiene should be given to the soldiers in the training camps. These men are undergoing a course of training in discipline, and in physical drill. But neither can produce their full effect unless the men know how to keep the functions of their organs in good order, and how to avoid dangers which inevitably undermine the strongest physique and reduce the finest athlete to a burden to himself and his country. The hygiene of the battlefield is peculiar in many respects, and needs careful handling. A skilled lecturer, who knows how to interest his audience, can do much to teach our brave soldiers how to preserve their health during the time when they are exposed to the uncanny invisible enemies, lurking in the trenches and hidden in the varied attractions of strange towns and strange companions.

PHYSIOLOGICAL EFFECTS OF DESCENDING FROM MOUNTAINS.

Among the numerous observations on the influence of altitude upon man only a few have dealt with the changes following the descent to a lower level. These observations have been made on men who have resided at the high level for a few days to several weeks. E. C. Schneider¹ has made a series of studies on the Resident Manager of the Summit House at Pike's Peak. This gentleman has resided, during a period of seventeen years, for six months each year on the summit, returning to Colorado Springs for the winter months. The subject is a man of athletic physique and excellent habits. He leads an active life. In consequence of living at a considerable altitude, the number of corpuscles in each cubic millimetre of his blood has been permanently increased. As a result of the descent, the number has diminished about 10%. The percentage of hæmoglobin in his blood has decreased very slowly after the descent, falling from 148 to 122 in six weeks. The specific gravity of the blood has diminished in the same time from 1.073 to 1.067. The total oxygen capacity of his blood did not alter for six days. At the end of the third week it had decreased 4.3%, and at the end of ten weeks 12%. His arterial blood pressure has remained constant about 115 mm. Hg. and has not been affected by the ascent or descent of the mountain. The rate of the pulse on the mountain has been, on the average, 82. The first day after the descent it was 60, and later it accelerated to 70 beats per minute. The power of holding the breath at the lower level is just twice as great as on the summit. Despite the fact that he has lived for so many years at a high altitude, his vital capacity and chest measurements are no greater than those of men of similar build and size who have lived their lives at sea-level.

When we consider the frequent use of altitude as a therapeutic measure in Australia and the large number of persons who have been advised to live in the Buffalo, on the Blue Mountains, on the slopes of Mount Wellington or in the Australian Alps, it is remarkable that no data are available as to the changes in the functions of the body occasioned by residence in these districts. It is desirable that information should be at hand for use by the physician, especially in regard to the time required to bring about the maximal amount of change in the characters of the blood.

THE CULTIVATION OF TISSUES IN ARTIFICIAL MEDIA.

Many observations recorded and experiments performed attest the variability in differentiation possessed by living cells. A considerable capacity for growth and modification has long been known as characteristic of the unicellular animal. It is only within the lifetime of the present generation that attempts have been made to note its occurrence in the cells of the multicellular organism. The older biologists believed that the integrity of the whole animal dominated the life of the individual cells which composed it. While it was recognized that

these cells possessed some adaptability, it was thought that their vital characters were dependent on the essential integrity of the organism. Numerous facts have now accumulated to teach us that the cells of even highly specialized mammals possess a much greater variation in the way of differentiation than had previously been supposed. When these cells form part of the body of the multicellular animal, they are directed in the growth by numerous influences arising in neighbouring or remote cells. If these directing influences are removed or modified, the cells are found to be capable of remarkable development. The phenomena of regeneration, which have attracted such attention in recent years, exemplify the latent possibilities hidden in the cellular components of the tissues and organs.

A new field of investigation has been opened by the cultivation of the cells of vertebrates and even of mammals on natural and artificial media. It is not yet possible to determine how far this line of research can be extended. Not more than fifteen years ago it was thought that phagocytosis occurred only under conditions that were infrequently produced. A simple technique has revealed to us its widespread existence. A few years ago it was found possible to obtain some cellular multiplication in fragments of embryonic tissues placed on the serum of the same animal. Embryonic tissues can now be grown freely in liquids, such as Locke's fluid, which contains inorganic salts and glucose. Miss M. R. Lewis² has noted that strips of embryonic muscular tissue from chick embryos multiply freely on Locke's fluid. Some fifty fibres can grow out in twenty-four hours. By sub-culture as many as five generations of these fibres have been obtained. These embryonic fibres undergo rhythmic contractions on the artificial medium, and can be stimulated by appropriate means.

THE STATE MEDICAL WAR COMMITTEE.

The functions and scope of the State Medical War Committees in course of construction have been defined. In order to obtain a clear conception of the way in which the work will be carried out, it is necessary to have regard to the relations of the various bodies appointed for the purpose of assisting disabled soldiers after their discharge from the service.

The Federal Parliamentary War Committee is a body consisting of members of both parties in the Commonwealth Parliament. This Committee has no connexion with the Department of Defence. It has an extremely wide reference, and among the varied matters with which it proposes to deal is the care of the men who have been disabled in active service. The Government has undertaken to provide treatment for the wounded and sick soldiers for varying periods. In the majority of cases, these men will receive their discharge from the Army at the expiration of six months after their return. In a few cases, the Department may retain the men, but save in regard to pensions the actual responsibility of the Government for the care of the men will cease at a definite time. Prior to this, as has been explained in previous issues of *The Medical*

¹ *Amer. Journ. of Physiology*, XXXII., p. 295, 1913.

² *Amer. Journ. of Physiology*, XXXVIII., p. 151, July, 1915.

Journal of Australia, the men will be treated in military hospitals, in general hospitals, in special convalescent homes and by private practitioners in the immediate neighbourhood of the men's homes.

As soon as the permanently disabled soldiers have been finally dealt with by the military medical authorities, the Federal Parliamentary War Committee steps in to help them to support themselves. It will be remembered that a sub-committee arranged the preliminary details leading to the formation of the Federal Medical War Committee (see *The Medical Journal of Australia*, September 4, 1915, p. 235). The object of the Federal Medical War Committee is to act as a purely medical body, to which the Parliamentary War Committee can turn for advice. Both the Federal Parliamentary and the Federal Medical War Committees are largely supervisory bodies and have coördinating functions. The State Councils will be political in constitution and will consist of members of the Federal Parliamentary War Committee, members of both parties in the State Parliament concerned, accredited representatives of various public bodies and others. A representative council of this kind will be in a position to safeguard the interests of the men and to create facilities for them, in order that no opportunity may be lost to them. While the general aspects of the work call for control by a body representative of the community, the actual work must be entrusted to experts, and for this purpose the State Medical War Committees are being appointed. They are to guide the State Councils in their respective States, but for the purpose of Federal or Inter-State coördination, they will be in a position to keep in touch through the agency of the President of the Branch of the British Medical Association or the member of the Branch serving on the Federal Medical War Committee.

The work of the State Medical War Committees will cover a wider field than that usually dealt with by medical men. The specialized work will be guided by the advice of experts in the training of particular classes of individuals. The provision, as we read it, empowers the Committees to call to their aid these experts in any way deemed to be advisable. It may be found best to co-opt these persons, or to seek their assistance in other ways.

PROFESSIONAL SECRECY.

There are times when the conduct of the medical practitioner should be governed by ethical considerations, even when this brings him into conflict with the law. Cases have arisen when the authorities demand information of a medical man concerning the procuring of abortion, concerning the commission of other form of crime and concerning the misconduct of persons. When a practitioner has received the confidence of his patient, and these disclosures include the discovery of a crime or act of misconduct affecting the patient and committed by a third party, the information given must be respected as confidential unless the patient releases the practitioner from silence. Not long ago a question was raised in Europe whether a medical man,

who obtained the knowledge of an act of murder in the course of his dealings with a patient, was required to give information to the police in the absence of the consent of the patient. By an overwhelming majority, it was decided that confidences gained in this manner must be regarded as inviolable.

The Representative Body was asked at the Annual Meeting in London this year to consider the principles involved and to endorse the opinions expressed by the Council of the British Medical Association. A perusal of the account of the meeting reveals some important aspects of this matter. It appears that the action of three medical men had been challenged from the legal point of view. These practitioners were in attendance on a woman, who subsequently died of the effects of an abortion, procured artificially. It is assumed that these practitioners were informed by the patient of the name of the person who committed the act. They gave no information. The law affords no protection to medical men for respecting the confidences of a patient, but, in the case of a lawyer, no one can make him divulge information given in his professional capacity. A similar privilege is extended to ministers of religion.

The Representative Body has come to the conclusion that a medical practitioner should not under any circumstances disclose voluntarily, without the consent of the patient, information obtained from the patient in the exercise of his professional duties; and, further, that the State has no right to require medical practitioners to disclose voluntarily information gained in this way. It has therefore dealt with one aspect of a wide question, but from the general tenor of the debate, it would seem that practical unanimity existed in regard to the whole matter.

Conditions arise from time to time in which a practitioner may be in doubt as to whether he is justified in acting on the information disclosed by his patient. The condition may be that a patient has submitted to the malpraxis of an abortionist. The medical practitioner should not divulge the name of the guilty person, save with the consent of his patient. Further, he should refuse to give evidence in a court of law in regard to information communicated to him confidentially by his patient, and, in the third place, he has no justification in giving information to the police concerning the condition of the patient. He should, however, refuse to sign a death certificate, and the fact of death having been caused by the effects of an abortion artificially procured may be communicated by him to the coroner. He should adopt the same course in other forms of murder. In the case of divorce court proceedings, he must obtain the consent of his patient before he is at liberty to disclose either without the court or within it the fact of misconduct having taken place between his patient and some third party. Lastly, when the patient is guilty of a crime or misdemeanour, and the fact of guilt is confessed to the doctor by the patient in the course of his practice, he must refuse under all circumstances to pass this information on to any other person. It is possible that this line of action may

prevent the punishment of a guilty person, but this consideration does not affect his responsibility toward his patient. Information gained by a medical man in his private capacity stands in an entirely different light, and must be disclosed to further the ends of justice.

THE SCHLINK FUND.

We beg to acknowledge with thanks the following contributions to the fund being raised to assist Dr. Schlink to meet the legal expenses incurred in his defence. We regret that the number of contributors is not larger, and venture to express the hope that in the ensuing week considerable additions shall be made to the fund.

	£	s.	d.
Amount previously acknowledged	10	10	0
Dr. Chapman, H. G.	1	1	0
" Fitzpatrick, E. B.	2	2	0
" Gibson, A. J.	1	1	0
" Grigor, W. E.	1	1	0
" "M.B."	1	1	0
" Ritchie, Harold	3	3	0
" Wall, F. E.	3	3	0
" "X.Y.Z."	1	1	0
Total	£24	3	0

It is announced in the daily press that Dr. James W. Hope, Principal Medical Officer, Commissioner of Public Health and Chief Quarantine Officer of Western Australia, is about to retire from the two first-named offices. The reason for his retirement is not given, but the statement is published that Dr. Hope has intimated to the Honorary Minister that he wished to be relieved of his duties. Dr. Hope has held the position of Commissioner of Public Health since the Central Board of Health was abolished in 1911. The State is greatly indebted to him for much valuable work, and the loss of his services will be keenly felt.

THE INSPECTION OF MILK IN NEW ZEALAND.

It appears that a serious attempt is being made in Wellington (New Zealand) to guarantee a satisfactory milk supply for the city. The City Council, through a Committee, had advocated to the District Health Officer and the Director of Live Stock and Meat Division a scheme for the better supervision of the milk introduced into the city. The Department of Public Health is being asked to collaborate with the City Council. An inspector is to be appointed by the Department, for the purpose of inspecting and taking samples of milk offered for sale in the city, while a second inspector is to be appointed for the same purpose by the Council. The latter is to be an officer of the Department, and is to work under the supervision of the Health Officer. The duties of each inspector are defined, and it is hoped that the control exercised by a collaboration of the Health Department and the City Council will effect a material improvement in the purity of the milk supplied to the public.

Some difficulty has been experienced in connexion with the transport of milk from country farms to the city. It appears that the by-laws of the City Council require that milk shall be conveyed in special milk-vans on the railway, and that no animal or human being travel in the same van. This by-law is not adhered to. The producers frequently fail to send the milk in time for the trains provided with milk vans. The cans are therefore placed in the ordinary luggage vans, and men, as well as sporting dogs, not infrequently occupy the same compartments. Steps are being taken to obtain the assistance of the railway authorities and of the producers, in order that the standard of purity of the milk may be raised.

THE JUBILEE INSTITUTE FOR THE BLIND.

The twenty-fifth annual report of the Jubilee Institute for the Blind, situated at Auckland, New Zealand, contains the record of a year's labour in the interests of the blind in New Zealand. The report presents a brief summary of the events leading to the inauguration of this useful institution. It was founded on July 9, 1890, at a meeting held

in Auckland, under the presidency of Mr. J. H. Upton. The object of the meeting was to take over and extend the work of a small society known as the "Association of the Friends of the Blind," which had been organized by Bishop Cowie in the previous year. The success of the efforts of the Association and the interest shown in it by leading citizens led to the desire to place it on a larger basis, and the project took definite form when the late Mr. John Abbott threw out the suggestion that the establishment of such an Institute might serve as a permanent memorial of the Jubilee of the Colony which had just been commemorated. The enlarged society received its appropriate name, and its scope was enlarged to embrace the whole colony. Its initial fund amounted to £1274. A glance at the balance sheet for the year ending March 31, 1915, shows assets estimated at £65,420. These figures tell the story of successful accomplishment in this charitable work. In 1905 it became possible to erect a permanent home for the Institution, when the fine building at present in use was built, at a cost of £13,735. There are now 93 men, women and children under the care of the Institute, including 13 who live outside, and come daily to work. The number of those who have benefited by residence totals 220, in addition to many who have been taught to read and write at their own homes. The work of the Institute may be considered under certain headings. Educational: The inspectors who examined the school reported that sound methods of instruction had been employed. Shorthand and typewriting were taught to the older pupils. Two pupils had competed for degrees at the University, and passed with honours. Technical: The classes in manual training had been most successful. The trade classes had made satisfactory progress in their various departments. Music: A number of pupils had sat for examinations with success. Pianoforte tuning: Six pupils had received instruction during the year in piano and organ tuning and repairing. They had been diligent and keen in their work. Trade department: The receipts from this branch yielded £1666, a decrease of over £500 on the previous year. This had been chiefly due to the poor crop of strawberries during the last season. The health of the inmates had been good, and there had been no cases of serious illness. The receipts for the year amounted to £8675, and the expenditure to £6976, leaving a balance of £1700. The committee of management is to be congratulated on the excellent way in which the affairs of the Institute are conducted.

WEST AUSTRALIAN DEAF AND DUMB INSTITUTION.

The West Australian Deaf and Dumb Institution is a school for the education of children over the age of six years, sound in body and mind, who are too deaf to be educated in the public schools. The eighteenth annual report of the Committee of the Management informs us that at the close of last year there were 27 pupils in attendance. Three students have left during the year and one has been admitted, so that there were 25 children in residence at the end of June, 1915. Fourteen of the pupils were girls. Those pupils whose friends and parents can pay fees are received in the usual way, but, in addition, deaf children are educated from the funds derived from donations when their relatives cannot pay the cost of the education. The subscriptions and donations to the funds of the institution amounted to £887—a decrease of £113 on the previous year's donations. In consequence, the Committee have had to enforce economy and to employ some legacies to diminish the overdraft at the bank. The health of the inmates has been good. One case of diphtheria occurred when the school assembled after the Christmas vacation, but the prompt isolation of the patient prevented further cases. Printed with the report of the Committee is a school report by the Superintendent. This report records very gratifying progress in the mental awakening of the children. Once they have gained some kind of language by which they can communicate with their fellows, their general education can proceed. The older pupils receive a manual education.

At the end of the booklet there is included some information on the care of deaf children. The deaf child is more in need of a proper education than the normal child. The training should be commenced at an early age. The best age for admission to a special school is seven years.

Abstracts from Current Medical Literature.

OPHTHALMOLOGY.

(117) Double Chancre of the Eyelid.

Finlay's patient was a woman of 40, a worker in a tobacco factory, who contracted syphilis probably from the use of a common towel (*Archives of Ophthalmology*, July, 1915). She noticed pain, redness, and itching at the inner canthus of the left eye. Three weeks later there was a focus of inflammation on the lower lid, near the outer canthus, which was diagnosed as a hordeolum. Six weeks later there was a large round ulcer at the outer canthus, with sharply-cut, hard edges; there was also a similar ulcer at the inner canthus. Both the pre-auricular and submaxillary glands were inflamed. At first the examination for spirochaetes and the Wassermann test were negative, but after three weeks both were positive, and about this time mucous patches appeared in the mouth and throat. Neo-salvarsan was given, and the sores disappeared rapidly. The author found reports of 100 cases, and estimates that there are about 500 cases described altogether. Peppmüller gave the proportion of chancre of the eyelid as 4% to 5% of other extragenital chancres. It is granted the third place after the lips and fingers. The mode of transmission varies considerably. Doctors have been infected in the treatment of throat cases. In some Russian villages as great a proportion as 15% to 25% of the population have acquired lid chancres from the habit of treating eye troubles by licking them. In the present case it is not clear whether the patient originally had a hordeolum which was secondarily infected, or whether hordeolum was a mistaken diagnosis. The first view may be correct, considering the length of time which elapsed before the lesion assumed a typical appearance, namely, two months. The author found records of only 8 cases of double chancre, and one of triple chancre of the eyelid. Attention has been called to the fact that chancres on the outer portion of the eyelids cause enlargement of the pre-auricular gland, and those on the inner portion enlargement of the sub-maxillary.

(118) Bi-temporal Hemianopsia.

Clifford B. Walker, from the material in Harvey Cushing's clinic, writes a long article upon field taking in pituitary cases (*Archives of Ophthalmology*, July, 1915). His main contention is that finer changes may be detected by using larger discs than the normal one of 5 mm. Discs of all sizes should be employed for accurate results. He has therefore constructed a series of 9 discs, the diameters of which increase in geometric progression from 0.15 mm. to 40 mm., with a

common ratio of 2. By means of these valuable information may be obtained, especially as to prognosis. For example, in his first case of pituitary struma, in a patient aged 49, with a large sella, adiposity, headaches, and failure in vision, an almost complete bi-temporal hemianopsia was determined by the normal disc, but in the lower temporal quadrants there was marked response to the larger discs. After the transphenoidal operation the return of vision took place in a typical manner, "budding" upwards from the lower temporal fields. Another characteristic feature was the bridging of the field of vision for the larger discs across the upper temporal defects, leaving an upper caeco-central scotoma. Central vision had also improved. One of his cases belongs to a group having an island of vision in the temporal field; after operation the island lost its isolation. Another case is quoted as an example of sharply defined bi-temporal hemianopsia, with no response to larger discs, and no temporal island. The prognosis was bad, and only slight improvement in central vision followed operation. The temporal island has been found with remarkable consistency in the neighbourhood of 50°, which, for some reason, is the strongest point in the temporal field. After operation the part last damaged usually recovers first. Recovery usually begins in the lower quadrant, and tends to bud out along the arc of greatest resistance, 50° in the temporal field, and joins the temporal island. The central and caeco-central portions are more backward.

Bjerrum first demonstrated the value of field examination with test objects of a small visual angle, but time and labour are required for the examination. To facilitate the work and to promote accuracy the author has devised his own apparatus. A circular section of a sphere of 28.6 cm. radius was made from a thin sheet of brass, which gave 35° in all directions from the fixation point. A second segment was soldered to one side of the edge of the circular piece, which gave 95° along three of the 30° radiating lines, and at least 35° along all of the other radiating lines. Special charts twice the ordinary size are used. The discs employed range from 0.15 mm. to 40 mm.

(119) Clinical Studies of Ocular Palsies.

Hawthorne advocates a more thorough examination, not only of the nervous system, but of all the systems, in cases of paralysis of eye muscles (*The Universal Medical Record*, 1915, VII.). This paralysis is so often a symptom of more widespread disease that the future of these patients is veiled in considerable uncertainty. He gives details of 19 cases, which illustrate his thesis. In four cases the patients sought advice for diplopia, accounted for by ocular paralysis, but further investigation showed the Argyll Robertson pupil and absence of knee-jerks,

and justified the diagnosis of tabes dorsalis. The fifth case presented bilateral ophthalmoplegia, which alone indicated a central lesion. Further examination revealed the fact that the masseter muscles were affected, indicating a lesion of the motor nuclei of both fifth nerves. Hence a diagnosis of bulbar paralysis was made. Another patient complained of diplopia, due to paralysis of the right external rectus. He had suffered from headache and giddiness. Examination showed that the knee-jerk was explosive, the ankle clonus readily obtained, and the plantar reflex gave an extensor response. Even in the absence of nystagmus, slurred speech and tremor, a diagnosis of disseminate sclerosis was made. Several cases, which began as palsy of one or more of the ocular muscles, proved to be instances of intracranial tumour. In one of these a primary growth of the nature of a malignant ulcer at the fundus of the bladder was discovered after death. Another patient, with double vision and later an optic neuritis, was found to have a scirrhus of the breast. In another case examination of the chest revealed signs of fluid and a temperature of 100.8°. The patient died soon after from basal meningitis. A young woman of 17 had ocular paralysis, associated with optic neuritis and anaemia. Under treatment by rest and iron she recovered completely. There are cases, however, where the ocular palsy seems to be unattended by any other symptom of disease, and here the palsy presumably is due to a neuritis. Even in these cases there may be the association of chronic alcoholism or diabetes. In one case Bell's palsy and facial herpes were present with the ocular paralysis. The commonest exhibition of hysterical paralysis is simulated ptosis from spasm of the orbicularis. It is easily detected. Ocular paralysis may be due to traumatism, and may follow severe coughing in pertussis.

(120) Progressive Optic Atrophy After Fracture.

Kleijn writes of a Belgian soldier, aged 19, who was hit on the head by a rifle butt and rendered unconscious. (*The Ophthalmoscope*, March, 1915). He lost blood from the mouth, and suffered from left frontal headache ever since. The vision of his left eye was not at first affected, but, after four months it was reduced to no perception of light. The right eye had normal vision. X-ray plates revealed no abnormality. The left eye still retained to some extent the pupil reflexes. About this time there was seen some contraction of the right visual field, and soon after the vision was reduced to about one half. The patient had some pain around the right eye, and the field for white and colours became contracted to 10° in all meridians. The most probable cause was the formation of callus around the seat of fracture in the neighbourhood of the optic foramina.

(121) Glass-Blowers' Cataract.

Cridland (*The Ophthalmoscope*, March, 1915) records the case of a man, a "puddler" (ironworker), aged 50 years, whose work exposed him to intense light and heat for many hours a day. The right lens showed a moderately dense posterior polar and cortical opacity, surrounded by a less dense area, with a well-marked irregularly-circular outline. There were also several striæ and dots at the periphery. The left lens was similar, but the opacities were denser. The vision was fingers at ten feet, improved by dilatation. The condition is uncommon, the author recalling only four or five cases in the last ten years. If occupation is the cause of the glass-blowers' cataract, it should equally be the cause of the puddler's, and the latter should be entitled to the same compensation under the Workmen's Compensation Act. He suggests the name "ray cataract" as indicating that the ætiological factor may be heat or light rays or both.

LARYNGOLOGY AND OTOTOLOGY.**(122) The Early Diagnosis of Mastoiditis.**

John J. Kyle (*Journ. Amer. Med. Assoc.*, August 7, 1915) pleads for an early diagnosis of acute mastoiditis, chiefly on the ground that the functional and general results of operation performed by a skilled aurist are extremely good, provided that the pathological processes are not too far advanced. Incidentally the author mentions that the results obtained in these operations by general surgeons are frequently unsatisfactory. In seeking for a reply to the question, when should an emergency operation be carried out in mastoiditis? he points out that in every case of middle ear abscess, with spontaneous rupture of the tympanic membrane, the mastoid is more or less involved. At times a mastoiditis may resolve spontaneously, but in these cases reinfection is common. He finds that marked tension of the pus in the middle ear is nearly always associated with mastoid infection. When the fever accompanying an otitis media persists after paracentesis, the mastoid is involved. Tenderness is a valuable sign, but it may be absent when the mastoid cells are full of pus. Pain is usually present. He regards a pulsating discharge of pus from the middle ear and fever as the most valuable signs of mastoiditis. The diagnosis, however, should, in his opinion, be based on the results of examination with X-rays. The author reproduces some skiagrams illustrating this point. He is insistent on having the interpretation of the skiagrams made by the aurist. He also emphasizes the necessity of always comparing the skiagram of the sound ear with that of the affected one.

(123) Indications for Mastoid Operations.

C. H. Welty, is inclined to pay more attention to the result of physical examination in cases of suspected mas-

toiditis than to the results of bacteriological examination (*Journ. Amer. Med. Assoc.*, August 7, 1915). Under ordinary circumstances the author proceeds as follows in a case of mastoiditis of one or two days' duration. He makes a free incision into the tympanic membrane, and packs the cavity with gauze, soaked in a hot solution of mercuric chloride (1:3,000). If these measures do not lead to a diminution of fever, a lessening of the pain, and a reduction of the bulging of the posterior superior wall, he proceeds to operate. An increasing leucocyte count causes him to keep a close observation on the patient, but is not in itself an indication for operation. He never incises a drum a second time. He states that an acute discharge from the ear should not be allowed to continue for more than 6 or 8 weeks. In supplementation of his account of his usual procedure, the author gives some details of various cases dealt with by him. In the first place he records an error in diagnosis in three cases of multiple furunculosis. The error was due to the fact that no Röntgen examination had been made. As a rule he does not place much reliance on negative X-ray findings. In one case a patient suffering from hæmorrhagic mastoiditis had facial paralysis. The cause of this could not be discovered until the patient died some months later of sarcoma of the brain. In all he has observed three cases of facial paralysis in acute mastoiditis. In some cases it was necessary to repeat the mastoid operation. In 9 cases acute otitis media followed fracture of the base of the skull, and in three of these an acute mastoid operation had to be performed. He gives further details of cases with brain complications, including sinus thrombosis. He states that the hearing after the operation is usually good. In all he performed the operation 106 times. While various authors give the mortality from 8 to 12%, he did not lose a single patient.

(124) Idiopathic Mastoid Abscess.

The question whether a mastoid abscess can be idiopathic, in the sense that it has arisen without any inflammatory involvement of the tympanic cavity, has been disputed for some considerable time. Virginius Dabney dealt with this matter in a communication to the Section on Laryngology, Rhinology and Otology, at the annual meeting of the American Medical Association, and as a result of his own observations and of the study of published cases he has come to the conclusion that this form does exist (*Journ. Amer. Med. Assoc.*, August 7, 1915). In the discussion which followed, his views were challenged by some of the speakers. He has found that 47 cases of so-called primary mastoiditis and periostitis had been published up to the time of the meeting. In 21 of these cases he had reason to believe that the middle ear was involved, although not to a considerable extent. In two further cases he was unable to determine whether otitis

media could be excluded or not. On the other hand he found that in 24 cases there was evidence that the suppurative condition of the mastoid, or of the periosteum covering the bone, had a hæmatogenous origin. In addition to these 24 cases he publishes the detail of two observed by himself. In neither was there deafness, tinnitus, or any abnormal sign in the middle ear, when examined after paracentesis, and the only symptom was swelling behind the auricle. Convalescence proceeded rapidly. No general signs of septic absorption were noted throughout the illness. The author calls attention to the fact that in osteomyelitis and in metastatic processes a hæmatogenous infection is recognized. He sees no reason why a pyogenic organism should not pass through a tissue without causing any pathological changes.

(125) Abnormal Length of Styloid Process.

W. S. Syme (*Journ. Laryng. Rhin. and Otology*, August, 1915) records the case of a medical man, who suffered from a sensation of dragging in the left side of his throat, which was increased on swallowing. He discovered a hard substance about the middle of the left tonsil. The tonsil was enucleated with a snare under local anaesthesia. A resistance was met with. A sharp point of bone was felt in the wound after the removal of the tonsil. This proved to be the styloid process. About an inch of the process was broken off with forceps. The symptoms disappeared completely.

(126) Nasal Conditions of Cerebro-spinal Meningitis.

The local nasal condition met with in cerebro-spinal meningitis have occupied the attention of E. A. Peters. On probing the sphenoidal sinus, two types are recognized (*Journ. Laryng. Rhin. and Otology*, July, 1915). In the first type the sinus are patent. Peters illustrates a case of this form. The patient was admitted to hospital with delirium, fever, Kernig's sign, and headache. Bacteriological examination of the mucus from the throat and of the cerebro-spinal fluid was negative at first. The illness ran a mild course. Rhinoscopically a little mucus was seen near the ostium of the left sphenoidal sinus. The sinus was patent. In the second type one or both sinus are closed. The author gives the detail of a case of this kind. Kernig's sign and rigidity of the neck were met with in the recrudescence of the disease. Mucous membrane of the bucco-pharynx was slightly moist and powdered in appearance. There was slight oedema in the region of the sphenoidal ostia. An operation was performed, and it was found necessary to use a small burr to enter the sinus. A drachm of pus containing meningococci was let out. The patient eventually died in a toxic condition of exhaustion, after all the cardinal signs of cerebro-spinal meningitis had disappeared. He adds the details of another case.

British Medical Association News.

MEDICO-POLITICAL.

A meeting of the Council of the Victorian Branch was held at the Medical Society Hall, East Melbourne, on September 9, 1915. Dr. Honman (the President) in the chair.

It had previously been decided to discontinue the issue of *The Medical Journal of Australia* to members of the Branch who were on active service abroad and whose subscriptions had not been paid for the current year. It was uncertain, however, in the case of many members whether they desired to receive their *Journals* or to be placed on the "travelling list" during their absence from the State. As there were at least 75 members involved, and the adoption of similar action in all States would mean a considerable loss of revenue to the Australian Medical Publishing Co., in which the Branches were financially interested, it was decided that the *Journals* should be sent as formerly.

The Royal Victorian Trained Nurses' Association had, at a previous meeting, sought the assistance of the Council in arranging for third year trainees to assist at the Military Hospitals, in order to relieve the shortage of nurses. As Colonel Fetherston had said at a recent Conference held at the Defence Department that he had 600 nurses to draw on, the Royal Victorian Trained Nurses' Association intimated that further steps were unnecessary. Members of the Council, however, were aware of a considerable shortage of nurses for civil practice, and viewed with alarm a greater shortage in the near future. The Council, therefore, forwarded a letter to the Director-General of Medical Services, asking him to arrange a conference on this subject between the Defence Department, the Victorian Trained Nurses' Association, the Bush Nursing Association, the Victorian Branch of the British Medical Association and the Voluntary Aid Detachment. It was pointed out that the last named body had rendered conspicuous service in England.

Drs. Fetherston, Boyd and Latham were nominated for election as Victorian members of the Federal Committee. The election will take place on September 30, 1915.

A number of questions with regard to professional ethics and advertising were reported on by the Ethical Committee. The recommendations of the Committee were adopted by the Council.

The War Organization Committee reported that letters had been received, informing them that Lodges were asking that returned soldiers, whose medical contributions had been allowed to lapse, should be allowed to go on the doctors' lists without re-examination. It recommended that the request of the Lodges should not be entertained as lodge practice at current rates was only workable on the basis of a considerable admixture of picked lives. This recommendation was adopted, and was conveyed to the Secretaries of the Divisions and Sub-Divisions.

There was evidence before the Council of the intention of the Defence Department to send convalescent soldiers to suburban practitioners, in order to relieve the congestion at the Base Hospital. The War Organization Committee recommended that a letter be sent to the Director-General Medical Services, intimating that if it was the desire of the Defence Department to change the terms of the agreement regarding treatment of convalescents, the Branch would be glad of an official intimation to that effect, in order that the matter could be re-considered. This recommendation was adopted.

Dr. Keith McKeddie Doig was elected a member of the Branch.

The following have been nominated for membership to the New South Wales Branch:—

Dr. Henri V. D. Baret, Waterfall Hospital.

Dr. Arthur Edward Machin, Royal North Shore Hospital.

A meeting of the Council of the South Australian Branch was held on September 17, 1915. The meeting determined to advise the Branch to approve of the scheme for looking after disabled soldiers after their discharge. Dr. Verco (the President), Dr. Bonnin, and Dr. Lynch were appointed members of the State Medical War Committee, and Dr. Verco was appointed Federal Representative.

A special meeting of the Branch was held immediately afterwards. The scheme and appointments received the endorsement of the members.

The State Medical War Committee for Queensland will consist of the following members: Dr. W. N. Robertson, Dr. Halford, and the Hon. W. F. Taylor, M.D.

BELGIAN DOCTORS' RELIEF FUND.

Queensland.

The following is the fourth list of subscriptions to the Queensland Branch of the Belgian Doctors' Relief Fund:—

	£	s.	d.
Amount previously received	52	16	6
Dr. Bourne, E. E., Brisbane (September contribution)	0	10	0
„ Cameron, J. A. Ipswich (September contribution)	2	2	6
„ Carvossa, A. B., Brisbane (September contribution)	1	1	0
„ Cooper, L., Brisbane (September contribution)	2	0	0
„ Love, Wilton, Brisbane (August and September contributions)	8	8	0
„ Roe, A. S., Brisbane (September contribution)	1	1	0
„ Scott, E. W. Kerr, Brisbane (August and September contributions)	2	2	0
„ Taylor, C. J., Normanton (May, June, July and August contributions)	2	2	0
„ Turner, A. J., Brisbane (September contribution)	2	2	0
Total	£74	5	0

Scientific Societies.

THE ROYAL SOCIETY OF NEW SOUTH WALES.

Since its inception in 1821, a society called since 1867 the Royal Society of New South Wales has devoted its attention to the advancement of knowledge. Scientific workers are few in numbers; there are few branches of science which occupy the attention of a sufficient number of persons in Sydney to justify the formation of a separate section. Thirty years ago a section for microscopical study flourished in Sydney, but it has not met for 20 years. During the last 13 years a small number of persons interested in the progress of knowledge in matters of medical importance have met three or four times a year. Gradually their researches acquired a bias towards the domain of public health. Some interest was taken in the researches by those whose professional duties brought them into relation with the problem of hygiene. It was noted that the Royal Society was a meeting place where chemists, engineers, bacteriologists, and medical men could associate to discuss their problems. The Council of the Society was approached with the object of obtaining a meeting of those likely to be interested, and it authorized the establishment of a Section of Public Health and Kindred Science.

The inaugural meeting was held on September 14, 1915. His Excellency the Governor was present. Sir Thomas Anderson Stuart was elected Chairman, and Dr. C. Savill Willis Honorary Secretary. The subject selected for discussion was military hygiene.

Sir Thomas Anderson Stuart dealt with the need of giving instruction on personal hygiene to recruits. The care of the health of troops was of importance in a campaign. In the Crimean war ten times the number of soldiers died of disease as died of injuries received from the foe. In the Boer war twice as many men died from disease as from wounds, while in the Russo-Japanese war those killed by wounds were twice as numerous as those who succumbed from disease. Recently he had visited Liverpool Camp, and was surprised to find that the recruits received no instruction on the care of their bodies. He had delivered a lecture there, and he was sure from the questions asked that the men had a keen interest in the matter. He gave a brief sketch of the lines that he considered should be fol-

lowed in giving instruction. The soldier should be taught that disease was transmitted by germs, that these germs were present in certain situations, and that they were carried in various ways from one person to another. They might also learn something of the manner in which insects transmitted the organisms of disease, not only by biting or sucking blood, but also by their feet. The care of the skin and the feet of the recruits was of great importance to them. Information might be imparted on the use of tobacco and alcohol. Instruction in military hygiene was quite as necessary to the soldier as his training in drill and musketry. He was of opinion that the Section should send a recommendation to the Defence authorities, urging that instruction in military hygiene should be made part of the routine duties of medical officers in camps.

Mr. A. Peake, M.Inst., C.E., dealt with the water supply of military camps. He quoted mortality figures from enteric fever and dysentery, and the number of hospital cases from these diseases, during the Boer war as an illustration of the necessity of every care being taken as to the quality of water supplied to troops. He then made a brief reference to the water supply of barracks and standing camps, and proceeded to give a description of the methods of supplying and distributing water to temporary camps and bivouacs. He dealt with the question of the selection of the source of supply, with the methods of ascertaining the quantity available, and with the processes of clarifying, filtering and sterilizing water. Referring to the treatment hitherto adopted in the British Army, he pointed out that it was impracticable to rely entirely on heat for the purpose of sterilizing as fuel was not always available. Even if fuel was found in sufficient quantities, the process occupied more time than was often permissible.

The use of chlorine by the method described by Professor G. Sims Woodhead was advocated. In this method iodine and starch were used to test the quantity of chlorine required for freeing a water from pathogenic bacteria. The test and treatment could be carried out rapidly. Mr. Peake exhibited some preparations for carrying out this system of treatment.

Dr. H. G. Chapman dealt with the food supply of soldiers. He said that armies were composed of those who had been declared to be physically fit. Such picked men were provided with food to supply what physicists called the energy for doing work. That food was burnt up within the body to the same products as were formed when the food was burnt in a furnace. The heat produced by combustion supplied the force that was manifested by the daily tasks of the soldier. The more work that was done, the more heat would be required, the more fuel must be burned. The experiments of the immortal Joule, of Manchester, had taught the world that there was a fixed relation between the quantity of heat utilized and the amount of mechanical work performed. Other experiments had taught us that the amount of heat formed on burning a substance was proportional to its quantity. If twice as much material was burnt, twice as much heat was formed. From these generalities of science it was apparent that the amount of work that a soldier did was determined by the food that he ate. The problem, however, was not quite simple. In the case of a locomotive it took twice as much fuel to carry the train twice the distance. If the fuel was not placed in the furnace the engine ceased to work. The human body was not the same. It started to burn up itself, when it had used the fuel available in its food. The less important parts of the body were combusted first. Later even essential structures were burnt in the struggle to maintain the heat of the body. In the case of a steamship straits might occur in which parts of the ship and its furniture were burnt when all the coal was finished. The more the framework and the furnishings of the ship were used for fuel, the less efficient and the worse equipped became the boat. Under conditions of stress insufficient food led to deterioration in the amount of work done. It had been found in the active stages of a campaign a soldier did twice as much work as at home in barracks or in civil occupation. A soldier on active service required food yielding 5000 calories or units of heat in each 24 hours. No soldier supplied with less food would maintain his fitness when forced to do heavy work. When long marches were carried out on

successive days great attention should be paid to feeding individual soldiers who were prone to eat little food. To apply this knowledge to the camp there was no need of complex instruments. All that was needed was a pair of scales. He did, however, contend that a pair of scales was necessary, and he urged that scales be used to check that the soldier had sufficient food. The soldier soon clamoured for food when he was hungry, but if his stomach was filled he was not hungry even when the work overtaxed his supply of food. The healthy man could be trusted to be guided by appetite, but at times the scales were better guides than appetites to the demands of the occasion. It was not necessary to weigh the soldier's food on all occasions, but the cooks' supplies should be weighed, and the rations served to individuals should be daily checked in order that men had received the proper amount of food.

Mr. T. H. Houghton, M.Inst., C.E., read a short paper on "Sanitary Service and Disposal of Wastes."

Dr. J. Burton Cleland spoke of protection against disease. He set up the thesis that the spread of epidemic diseases was largely dependent on the density of the population. Consequently if people could be separated from one another over a vast territory, these diseases would not occur. Conversely, the conditions obtaining in training camps, in which 8, 10 or 12 men slept side by side in a stuffy tent, were very favourable for the spread of epidemic diseases. He therefore advised that whenever the climate and military exigencies allowed, soldiers should sleep in the open air as far as possible from one another.

He then turned his attention to a number of diseases which had to be combated. These diseases he divided into groups. In the first place there were those for which absolute protection could be given. He instanced variola as a disease belonging to this type. The second group consisted of diseases in which a marked measure of immunity could be afforded by artificial means. The diseases dealt with under this heading were diphtheria and tetanus. Dr. Cleland pointed out that troops could not be protected against tetanus weeks or months beforehand; and that the use of anti-tetanic serum must therefore be confined to wounded men whose wounds were considered likely to harbour the tetanus organism. He spoke of the protective value of diphtheria anti-toxin. The third group comprised diseases in which a definite measure of immunity could be afforded. Enteric fever was quoted in this connexion. He pointed out that there was strong evidence to show that protection could also be afforded to some extent against cholera, and the dysenteries. He stated that anti-typhoid inoculation was by no means an absolute protection against the disease. He emphasized the necessity of three doses of vaccine. The fourth group was that in which the diseases tended to occur in childhood. In these instances a relative immunity in adult life was attributed to infections in childhood. The instances quoted were scarlatina, morbilli, and parotitis. The suggestion had been made that visitors to camp should be prohibited. This might prevent some men from becoming infected, but it might also have a serious effect on recruiting.

The fifth group consisted of diseases spread by vermin, and included typhus fever, and probably relapsing fever. Sir Thomas Anderson Stuart had already dealt with the question of lice and other vermin. Pneumonia was dealt with separately, and Dr. Cleland then turned his attention to epidemic cerebro-spinal meningitis. He spoke of the large number of persons who harboured the causal organism without manifesting any signs of illness, and suggested that sore throats and camp cough might be at times manifestations of infection by the meningococcus. It was useless to break up the camp. Disinfection of bedding, etc., should be carried out, and spraying of the naso-pharynx with some mild disinfectant might be employed. He pointed out that these methods and the use of eucalyptus oil were unlikely to effect much good.

In conclusion he dealt rapidly with Malta fever, infective catarrhs, tuberculosis, and venereal disease.

His Excellency the Governor made a few remarks after the four papers had been read. He considered that Sir Anderson Stuart's contribution should be published, and the copies distributed among the men in training. He had been

deeply interested in the other papers. In regard to Dr. Chapman's utterances, he expressed some surprise. He had been lead to believe that people usually ate and drank too much. It now appears that during hard work the reverse was the case in regard to solid food.

The discussion on the whole subject was postponed until the next meeting of the Section.

Public Health.

THE HEALTH OF NEW SOUTH WALES.

The following notifications have been received by the Department of Public Health, New South Wales, during the fortnight ending September 13, 1915:—

	Metropolitan Combined Districts. Cs. Dths.	Hunter River Combined Districts. Cs. Dths.	Remainder of State. Cs. Dths.	Total. Cs. Dths.
Enteric Fever ..	26 5 ..	1 — ..	18 2 ..	45 7
Scarlet Fever ..	165 1 ..	5 — ..	103 — ..	273 1
Diphtheria ..	88 4 ..	9 1 ..	58 2 ..	155 7
Infntile Paralysis	2 — ..	— ..	2 — ..	4 —
Malaria ..	3 — ..	— ..	— ..	3 —

INFECTIVE DISEASES IN WESTERN AUSTRALIA.

The following notifications have been received by the Department of Public Health, Western Australia, during the week ending September 4, 1915:—

	Enteric Fever. Cases.	Diphtheria. Cases.	Pulmonary Tuberculosis. Cases.
Fremantle ..	—	—	1
Fremantle East..	—	1	—
Perth ..	—	3	—
Guildford West ..	—	—	1
Queen's Park ..	—	—	2
Boulder ..	—	1	—
Coolgardie ..	1	—	—
Broad Arrow ..	—	2	—
Northam ..	—	1	—
North Dandalup..	—	1	—
Total ..	1	9	4

INFECTIVE DISEASES IN QUEENSLAND.

The following notifications have been received by the Department of Public Health, Queensland, during the week ending September 11, 1915:—

Disease.	No. of Cases Reported.
Varicella ..	37
Diphtheria ..	23
Enteric Fever ..	5
Pulmonary Tuberculosis ..	3
Erysipelas ..	3
Malaria ..	3
Anterior poliomyelitis ..	1
Scarlatina ..	1
Total ..	76

HEALTH OF VICTORIA.

The following notifications have been received by the Department of Public Health, Victoria, during the week ending September 16, 1915:—

	Metropo- litan. Cs. Dths.	Rest of State. Cs. Dths.	Totals. Cs. Dths.
Diphtheria ..	48 2 ..	29 1 ..	77 3
Scarlatina ..	8 0 ..	4 0 ..	12 0
Enteric Fever ..	1 0 ..	1 0 ..	2 0
Pulmonary Tuberculosis	23 6 ..	15 7 ..	38 13

The following is a return of the cases of epidemic cerebro-spinal meningitis notified to the Board during the week ending September 16, 1915:—

	Metropolitan Area. Cases.	Rural Districts. Cases.	Totals. Cases.
Military..	—	—	12
Civil ..	19	17	36

The cases of cerebro-spinal meningitis occurred in 46 out of the 208 municipalities in Victoria.

SMALL-POX IN NEW SOUTH WALES.

The following cases of small-pox have been reported to the Department of Public Health, New South Wales, during the week ending September 19, 1915:—

	Cases.
Newcastle District ..	5

In the Official Report of the Federal Quarantine Bureau, issued on September 7, 1915, the Director gives an account of the incidence of plague, cholera and small-pox in various countries during the past few months.

Plague.

In India, from July 4 to July 31, 1915, 2,432 cases and 1,714 deaths were reported. There were 20 cases and 20 deaths in Hongkong from July 11 to 31, 1915. In Egypt, 18 cases and 10 deaths were recorded from July 2 to August 5, 1915. There were 43 cases with 39 deaths in Java from July 2 to July 15; 18 cases and 7 deaths in Cuba from February 5 to May 27, 1915; 5 cases in Ceylon from June 13 to July 31, 1915, and several cases in Brazil during the month of May. No further cases have occurred in the Philippine Islands since September 12, 1914.

Cholera.

The only cases of cholera reported occurred in the Straits Settlements, where there were 2 cases between June 10 and August 2, 1915, and 2 deaths.

Small-pox.

The Director reports that variola is no longer prevalent in the Canary Islands, and that no vessels had been subjected to quarantine on this account. New South Wales is the only place mentioned where small-pox exists at the present time.

THE HEALTH OF SYDNEY.

The mortality returns for August, as supplied by the Government Statistician, shows that 803 deaths occurred in the Metropolis of Sydney, including 38 deaths of individuals previously resident outside the Metropolis, and deaths classified as taking place in the Islands and shipping and in the Harbour.

Thus calculating on an estimated population of 752,500, the annual death-rate for the month works out at 12.81 per 1,000 of the population.

Deducting the deaths of persons non-residents of the Metropolis in the Mental Hospitals of Leichhardt and Hunter's Hill (Callan Park and Gladesville), and adding the deaths of persons residents of the Metropolis occurring at the Benevolent Asylums, Mental Hospitals, and Consumptive Sanatoria situated outside the Metropolis, the number of deaths was 777, giving a corrected death-rate of 12.39 per 1,000.

Among children under one year of age, 116 deaths were recorded for the Metropolis.

There were 1,720 births during the month, giving a rate of 27.43 per 1,000 of the population, which is not satisfactory, being 9% below the average of the previous five years.

The infantile mortality rate was 68 per 1,000 births, being 9% above the average for August of the previous five years.

Infectious diseases were responsible for 98 deaths, of which 60 were due to measles, 5 to scarlet fever, 4 to influenza, 5 to diphtheria, 6 to typhoid fever, 10 to cerebro-spinal meningitis, and 8 to puerperal fever.

Diarrhoeal diseases were credited with 16 deaths, cerebral hæmorrhage caused 23 deaths, phthisis 55, cancer 55, prematurity 35, senility 43, diseases of the heart and blood vessels 86, bronchitis 28, pneumonia 90, Bright's disease 51, and accident or negligence 28.

Compared with the average for August of the previous five years, there were increases in the number of deaths from infectious diseases, senility, pulmonary diseases, can-

cer, diarrhoeal diseases, and Bright's disease; with decreases in cerebral hæmorrhage, and diseases of the heart and blood vessels.

Two hundred and sixty-six cases of scarlet fever, 169 of diphtheria, 53 of typhoid fever, 1 of malaria, and 2 of anterior poliomyelitis were notified during the month of August.

Twenty-seven cases of phthisis (consumption of the lungs and consumption of the throat) were notified under the City Council's by-laws, and 22 premises were disinfected by the Council's trained staff after the death or removal of the patients.

(Signed) F. M. SUCKLING,
Acting Medical Officer of Health.

Naval and Military News.

AUSTRALIAN IMPERIAL FORCE.

On July 31, 1915, we published the Official List of Medical Officers of the A.A.M.C., revised to February 3, 1915, and intimated that the names of those who had joined since that date would be published in a subsequent issue. In order that the list may be of practical value to readers, we are reproducing the first list, with additions to date, and have arranged the names in alphabetical order, preserving the order of rank. This list will be supplemented from time to time.

Medical Officers of Army Medical Corps.

Colonel	T. H. Fiaschi, D.S.O.,	Major	D. A. Cameron
	V.D.		A. W. Campbell
"	Sir A. MacCormick	"	G. B. Carter
"	C. S. Ryan, V.D.	"	D. G. Croll
"	W. D. C. Williams,	"	P. G. Dane
	C.B.	"	C. E. Dennis
Lt.-Col.	J. W. Barrett	"	G. P. Dixon
"	H. K. Bean	"	T. P. Dunhill
"	J. L. Beeston, V.D.	"	W. A. Edwards
"	A. B. Brockway	"	H. C. Garde
"	H. W. Bryant, V.D.	"	J. L. Gibson
"	R. G. Craig	"	J. Gordon
"	A. M. Cudmore	"	W. C. Grey
"	C. T. C. De Cres-	"	J. A. G. Hamilton
	pigny	"	K. Harris
"	J. A. Dick	"	W. W. Hearne
"	R. M. Downes	"	W. M. Helsham
"	J. F. Flashman	"	W. K. Hughes
"	W. W. Giblin	"	E. S. Jackson
"	C. H. W. Hardy,	"	F. D. Jermyn, V.D.
	V.D.	"	D. H. E. Lines
"	W. T. Hayward	"	C. C. MacKnight
"	A. Horn	"	R. Macdonald
"	N. R. Howse, V.C.	"	H. R. Maclean
"	R. B. Huxtable	"	F. H. Makin
"	S. Jamieson	"	J. B. McLean
"	H. N. MacLaurin	"	R. J. Millard
"	G. A. Marshall, V.D.	"	A. E. Mills
"	T. M. Martin	"	J. Morton
"	H. C. Maudsley	"	A. H. Moseley
"	J. B. Nash, V.D.	"	H. S. Newland
"	B. J. Newmarch,	"	J. H. Phipps
	V.D.	"	A. H. Powell
"	R. E. Roth, D.S.O.,	"	J. S. Purdy
	V.D.	"	C. Read
"	W. R. Smith	"	W. H. Read
"	J. W. Springthorpe	"	S. J. Richards
"	R. R. Stawell	"	T. G. Ross
"	A. Sutton	"	C. G. Shaw
"	A. H. Sturdee, V.D.	"	J. A. H. Sherwin
"	R. T. Sutherland	"	R. E. Shuter
"	G. A. Syme	"	B. Smeaton
"	A. T. White, V.D.	"	K. Smith
Major	E. B. Allen	"	H. J. Stewart
"	S. S. Argyle	"	J. E. F. Stewart
"	W. Baker	"	J. M. Y. Stewart
"	G. W. Barber	"	E. S. Stokes
"	S. R. Burston	"	W. E. Summons
"	H. N. Butler	"	H. C. Taylor Young

Major	W. Trethowan	Captain	E. J. F. Deakin
"	W. G. D. Upjohn	"	E. W. Deane
"	A. Watson	"	H. L. Deck
"	J. R. Webb	"	J. E. Dods
"	W. A. Wood	"	J. H. Downing
"	T. G. Wilson	"	A. P. Drummond
"	B. T. Zwar	"	A. T. Dunlop
Captain	K. G. McK. Aberdeen	"	L. W. Dunlop
"	J. K. Adey	"	A. J. Dunn
"	J. Aicken	"	R. E. Dunn
"	A. Alchorn	"	C. P. W. Dyring
"	S. H. Allen	"	E. C. East
"	H. F. Alsop	"	F. P. Edwards
"	A. Anderson	"	D. N. Embleton
"	J. H. Anderson	"	T. C. C. Evans
"	T. L. Anderson	"	W. Evans
"	A. J. Aspinall	"	E. Ferguson
"	C. N. Atkins	"	P. Fiaschi
"	J. G. Avery	"	C. N. Finn
"	G. B. Bailey	"	E. M. Fisher
"	A. S. D. Barton	"	S. C. Fitzpatrick
"	F. T. Beamish	"	H. Flecker
"	J. W. B. Bean	"	W. M. A. Fletcher
"	J. R. S. G. Beard	"	J. P. Fogarty
"	J. R. McN. Beith	"	H. H. B. Follitt
"	J. B. Bell	"	B. Foster
"	V. Benjafield	"	R. Fowler
"	D. Bennett	"	H. V. Foxton
"	A. B. Bennie	"	W. A. Fraser
"	J. Bentley	"	T. J. Frizell
"	L. O. Betts	"	H. K. Fry
"	J. J. Black	"	A. Y. Fullerton
"	I. Blaubaum	"	T. M. Furber
"	F. S. Bond	"	E. W. Gettridge
"	L. W. Bond	"	A. H. Gibson
"	I. McW. Bourke	"	A. J. Gibson
"	A. J. Brennan	"	K. C. Godfrey
"	E. T. Brennan	"	F. Goldsmith
"	B. Brooke	"	A. Goldstein
"	C. Brown	"	S. M. Graham
"	T. F. Brown	"	F. A. Gray
"	W. G. Brown	"	H. F. Green
"	D. J. W. Browne	"	T. A. Grieves
"	H. P. Brownell	"	K. H. Grieve
"	D. de C. Browning	"	J. V. Griffiths
"	E. A. Brummitt	"	E. W. Griffiths
"	A. L. Buchanan	"	K. Hammond
"	J. D. Buchanan	"	J. Hardie
"	S. B. Burge	"	H. Harris
"	D. Butcher	"	J. P. Hastings
"	A. G. Butler	"	A. R. Haynes
"	G. C. Byrne	"	L. A. Hayward
"	D. D. Cade	"	L. Henderson
"	J. C. Campbell	"	W. de W. Henty
"	R. D. Campbell	"	A. R. Heupt
"	S. J. Cantor	"	J. J. Hollywood
"	M. W. Cave	"	A. V. Honman
"	R. W. Chambers	"	O. R. Horwood
"	C. L. Chapman	"	F. M. House
"	A. E. Clarke	"	A. O. Howse
"	H. J. Clayton	"	F. Howson
"	W. J. W. Close	"	E. V. R. Huckell
"	J. Corbin	"	R. H. Hudson
"	K. S. Cross	"	T. E. V. Hurley
"	A. S. Clowes	"	B. Ingram
"	G. E. Cole	"	H. E. A. Jackson
"	A. E. Colvin	"	J. A. James
"	W. J. Connolly	"	D. D. Jamieson
"	H. V. P. Conrick	"	L. W. Jeffries
"	L. R. Cook	"	F. M. Johnson
"	E. R. Cordner	"	M. B. Johnson
"	C. C. Corless	"	W. W. S. Johnson
"	L. Cowlishaw	"	A. F. Jolley
"	W. L. Crowther	"	F. W. Kane
"	E. Culpin	"	S. Kay
"	A. E. Cullen	"	W. E. Kay
"	R. W. Cunningham	"	A. J. Kelsey
"	A. S. Curtin	"	B. C. Kennedy
"	P. A. C. Davenport	"	J. Kenny
"	A. L. Dawson	"	J. P. Kenny
"	D. Dawson	"	N. E. B. Kirkwood

Captain W. L. Kirkwood	Captain F. H. Sabiel
" G. A. W. J. Knight	" V. W. Savage
" F. N. Le Messurier	" W. C. Sawers
" F. D. H. B. Lawton	" R. D. Shaw
" T. G. S. Leary	" C. Shellshear
" H. B. Lee	" N. C. Shierlaw
" J. H. Leon	" W. M. Sinclair
" J. B. Lewis	" C. V. Single
" H. B. Lewers	" J. A. Smeal
" E. F. Lind	" A. C. Smith
" H. G. Loughran	" C. N. Smith
" F. T. A. Lovegrove	" M. V. Southey
" J. F. G. Luther	" J. Sprent
" G. W. Macartney	" W. J. Stack
" J. Macdonald	" V. O. Stacy
" L. G. A. MacDonnell	" K. N. Steele
" F. MacIntyre	" E. H. M. Stephen
" E. R. Mackay	" R. St. C. Steuart
" J. G. Mackenzie	" H. Stoker, V.D.
" A. F. Maclure	" A. F. Stokes
" W. R. C. Mainwaring	" J. C. Storey
" P. A. Maplestone	" G. E. M. Stuart
" A. H. Marks	" J. C. P. Strachan
" C. E. Marshall	" B. M. Sutherland
" W. F. Matthews	" M. G. Sutton
" C. Mattel	" J. T. Tait
" J. C. Mayo	" R. J. Taylor
" R. E. McClelland	" H. O. Teague
" A. J. McDonald	" A. H. Tebbutt
" J. E. F. McDonald	" C. W. Thompson
" V. McDowall	" W. H. Tofft
" J. H. McGee	" C. J. Tozer
" R. S. McGregor	" H. H. D. Turnbull
" D. S. McKenzie	" C. T. Turner
" J. B. F. McKenzie	" J. S. Verco
" A. McKillop	" A. Verge
" W. W. McLaren	" G. H. Vernon
" R. M. McMaster	" W. Vickers
" D. M. McWhae	" A. P. Wall
" W. C. Medlyn	" F. L. Wall
" A. J. Meikle	" R. W. W. Walsh
" H. F. Mitchell	" C. E. Wassell
" A. J. Mollison	" R. F. Watson
" C. G. G. Moodie	" R. A. P. Waugh
" C. Morlet	" F. T. Wheatland
" W. A. Morton	" H. L. St. V. Welch
" J. R. Muirhead	" J. B. St. V. Welch
" J. A. Murphy	" L. St. V. Welch
" W. T. Newton	" J. C. Wells
" J. J. Nicholas	" C. H. Wesley
" J. L. Niven	" W. H. Weston
" J. D. Norris	" E. R. White
" H. C. Nott	" R. S. Whitford
" J. A. O'Brien	" E. A. Widdenbach
" W. E. O'Hara	" G. Wilcox
" H. O. Oliver	" J. W. Wilkinson
" C. R. Palmer	" H. J. Williams
" C. K. Parkinson	" A. M. Wilson
" E. K. Parry	" R. C. Winn
" J. T. Paton	" H. H. Woollard
" H. Pern	" C. Yeatman
" D. C. Pigdon	" M. Yuille
" C. F. Pitcher	" J. S. Yule
" H. F. H. Plant	
" H. R. G. Poate	Hon. Cp. O. J. Lawson
" A. H. Powell	" R. A. Lowry
" J. J. Power	" C. Morley
" B. Quirk	" W. R. E. Sabine
" E. M. Ramsden	Hon. Lt. E. St. J. Beers
" J. Reiach	" J. W. Blacklock
" W. H. Rennick	" E. T. Boddam
" D. G. Robertson	" S. C. Francis
" G. S. Robinson	" T. F. Hall
" R. L. Rosenfield	" W. K. Smith
" C. C. Ross	" A. P. Anderson Stuart
" E. A. H. Russell	" R. C. Tute
" E. H. Rutledge	

Transport Staff, with Pay of Captain.

Lt.-Col. H. A. Embling	Major C. L. Lempriere
" N. B. Gandevia, V.D.	" A. W. F. Noyes

Major A. Pentland	Captain T. B. Lewers
" G. Read	" H. H. Montgomery
Captain H. Gilbert	" C. A. Payne
" D. G. Hughes	" C. B. Pym

Dental Reserve.

Hon. Lt. L. B. Day	Hon. Lt. F. Marshall
" G. Douglas	" E. F. Molle
" J. E. Down	" C. H. Terry

The following is an official list of the casualties up to date among the Medical Officers on service with the Australian Imperial Force. With the addition of the name of the late Captain Pockley, the list may be regarded as a complete record of the casualties of medical officers in the Australian Army Medical Corps.

Lieut.-Colonel N. R. Howse, V.C., wounded.
 Lieut.-Colonel G. A. Marshall, V.D., wounded.
 Major S. J. Richards, died of illness.
 Major H. N. Butler, wounded.
 Captain S. J. Campbell, died of wounds.
 Captain G. C. M. Mathison, died of wounds.
 Captain L. W. Dunlop, dangerously wounded.
 Captain K. M. Levi, killed in action.
 Captain J. W. B. Bean, seriously wounded.
 Captain R. W. Chambers, wounded.
 Captain D. M. McWhae, wounded.
 Captain H. B. Lewers, wounded.
 Captain R. S. Whitford, wounded.

The official list of medical officers serving in the Australian Imperial Force who have been mentioned in the despatches from the front contains the names of Lieutenant-Colonel W. L. E. Eames, C.B., Lieutenant-Colonel N. R. Howse, V.C., and Captain A. Graham Butler.

The following notice has appeared in the Commonwealth Government Gazette under date of September 16, 1915:—
 Army Medical Corps.

To be Lieutenant-Colonel, with Pay of Captains—
 Lieutenant-Colonel H. A. Embling, V.D., Unattached List.

To be Captains—
 Captain (provisional) A. F. Stokes and Captain (provisional) D. Dawson, A.A.M.C.

Alexander Bruce Bennie.
 Baron Brooke and Norman Maxwell Gibson
 John Patrick Hastings and John Goodall Avery.
 Richard Hastings Hudson and Denis Joseph Glissan.

To be Lieutenant-Colonels—
 Honorary Major W. T. Hayward, A.A.M.C. Reserve.
 Charles MacLaurin.

To be Majors—
 Captain C. E. Dennis, A.A.M.C.
 Honorary Captain H. C. Taylor Young, A.A.M.C. Reserve.

Honorary Captain D. A. Cameron, A.A.M.C. Reserve.

To be Captains—
 George Wiston Baker.
 Captain (provisional) J. A. Smeal, A.A.M.C.
 Honorary Captain W. H. Tofft, A.A.M.C. Reserve.
 Honorary Captain M. G. Sutton, A.A.M.C. Reserve.
 Honorary Captain A. E. Cullen, A.A.M.C. Reserve.
 Eustace William Ferguson.
 Charles Bazett Deane-Butcher.
 Oswald Ryle Horwood.

To be Honorary Lieutenant—
 Honorary Lieutenant F. M. Bradshaw, A.A.M.C. Reserve.

In the casualty list published in the second week of August dealing with the Mediterranean Expeditionary Force under the heading wounded are the following entries:—

Holt, Major T., M.B., R.A.M.C., attached to the 6th Lancashire Fusiliers.
 Lithgow, Captain J., R.A.M.C., T.F.
 Shaw, Surgeon Hugh K., M.B., R.N. Field Ambulance (slightly wounded).

THE AUSTRALIAN INSTITUTE OF TROPICAL MEDICINE.

The Annual Report of the Australian Institute of Tropical Medicine, Townsville, Queensland, for the year ending June 30, 1915, issued in two parts, was laid before the Commonwealth Parliament on July 22, 1915.

During the second half of 1914 Dr. W. Nicoll communicated papers on his researches on *Onchocerciasis* in cattle and on animal parasitism in tropical Queensland to the meeting of the British Association for the Advancement of Science. Dr. A. Breinl and Dr. H. Priestley were engaged in a study of Mossman fever. The hæmatological examination in this condition revealed a slight leucocytosis, but no changes in the red blood corpuscles or in the amount of hæmoglobin. Lymph glands extirpated from the neck and groin were found to be in a condition of acute inflammation. While the bacteriological investigations proved negative, these workers succeeded in transmitting Mossman fever to monkeys by the inoculation of blood from patients. The inoculation experiments with guinea-pigs proved negative.

Dr. Breinl also published the results of his observations on diseases in British New Guinea. Four diseases not previously described were met with. One was a curious and apparently specific fever, the second was a disease characterized by arthritis, osteitis, and periostitis, while the third and fourth have been called contracting sore, and *ulcus interdigitale destruens*.

Dr. W. J. Young gives a record of the work undertaken in his department. He gives a number of details of a research on the body temperature of white people living in the tropics. This matter has already been dealt with in *The Medical Journal of Australia*. He had also conducted experiments in connexion with lead poisoning in children, and in connexion with the action of salvarsan, neo-salvarsan in the body. Breinl and Nierenstein suggested some time ago that when atoxyl was injected into the body, part of it was bound by the serum. The serum-atoxyl formed underwent oxidation, and an inorganic compound of arsenic was set free. They attributed the trypanocidal action of atoxyl to this inorganic compound. Dr. Young has evidence of the formation of a similar combination of salvarsan and serum when the former is injected into goats.

Dr. William Nicoll has continued his researches on hook-worm infections. He has carried out some observations on the possible relation between the mosquito larvæ and hook-worm larvæ.

In addition to his researches on Mossman fever, Dr. Henry Priestley has been engaged on the bacteriological investigation of the Townsville water supply. There has, he states, been no evidence of recent faecal contamination. He has attempted to cause mutation in *Bacillus cloacæ* by the effect of sunlight, but without success.

Mr. F. H. Taylor spent three months enquiring into the distribution of mosquitoes in the Northern ports of Queensland for the Quarantine Department, more especially with a view to mapping out the prevalence of the *Stegomyia fasciata*. A new species of culex was found in Normanton. At Port Douglas the male of *Mysorhynchus barbirostris*, var. *banerofti* was found, as was a species of culex with spotted wings hitherto undescribed.

In the report for the half year ending June 30, 1915, Dr. Breinl records that Dr. Priestley, accompanied by Dr. Rodger, the Ophthalmic Inspector of the Department of Public Instruction, undertook a study of the eye affections prevalent among the school children in the western districts of Queensland. They have shown that in many cases the affection was a true trachoma. He records that Dr. Marshall, the Resident Medical Officer at the Hospital at Guadalcanar, in the British Solomon Islands, had supplied him with some interesting histological material.

Dr. Breinl himself has been engaged in investigating some problems connected with beri-beri. He has come to the conclusion that beri-beri is a place-born disease, and that in addition to the deficiency of vitamins in the diet, a bac-

terial infection played an ætiological part. The result of his investigations will be published in a short time.

Some experiments were conducted with a view of ascertaining whether the blood of patients suffering from dengue fever could carry the disease on inoculation. A uniformly negative result was obtained in six cases. Dr. Breinl points out that these experiments show that dengue differs in this respect from endemic glandular fever. Experiments in connexion with sprue were also undertaken.

Dr. Breinl working with Dr. Young are at present studying serum ferments, and their anti-ferments.

Some very interesting work has been carried out during the half-year by Dr. W. J. Young. This research was connected with the constituents of the urine of white people in the tropics. The investigation included the determination of the concentration of salts and the osmotic pressure. The acidity was measured by the estimation of the concentration of hydrogen ions. These and other matters form the subjects of various publications, some of which are still in the press.

In addition to the ordinary routine work and the trachoma research mentioned below, Dr. H. Priestley has made a number of observations on the neutrophile blood picture (Ar-neth) observed in children in Queensland. Two contributions on this subject have appeared in the *Annals of Tropical Medicine*.

These details, which have been selected from a considerable number, are evidence of the wide scope of the work undertaken at the Tropical Institute and of the importance of the several investigations. The report gains considerably in interest by the inclusion of a resumé of the researches. Dr. Breinl and his co-workers are to be congratulated on their contributions to scientific medicine and the allied subjects during the year.

Obituary.

JOHN ASBURTON THOMPSON.

A little over a year ago Dr. Asburton Thompson announced his intentions of returning to the "old country" to enjoy a period of rest after many years of strenuous work. The outbreak of war caused a temporary change in his plans, but in April of this year he took leave of his friends in Sydney, and journeyed with his wife and stepdaughter to England. Shortly after his arrival in London he was taken ill with a cardiac affection, and, on September 16, 1915, he entered his last long rest. The news of his death was received in Sydney by cable on September 18.

John Asburton Thompson was born in 1848. He was the eldest son of the late John Thompson, a well-known solicitor, practising in Lincoln's Inn Fields, London. He was educated at St. Paul's School in the days when this institution was situated in the city of London. He attended classes at University College, and subsequently became a medical student at Guy's Hospital and Middlesex Hospital. In 1868 he obtained the diplomas of the Royal College of Surgeons and Physicians, and of the Society of Apothecaries. In 1878 he obtained the degree of M.D. at the Brussels University *avec distinction*. During his hospital career he singled himself out from amongst his colleagues by carrying off the prize of the Physical Society in 1867. After a short period of assistant work he obtained the position of surgeon at King's Cross to the Great Northern Railway Company. He held this position from 1872 to 1878, and it appears that he carried out private practice during that time. During the second half of this period he entered into partnership with Dr. John Brunton, who had an extensive practice in the neighbourhood of Euston, a neighbourhood which has altered in character very considerably since those days. He soon obtained a considerable reputation as an obstetrician. In 1877 he was elected a member of the Council of the Obstetrical Society of London. It is stated that he was the youngest member ever elected. In consequence of working at high pressure, including a con-

siderable amount of night work, his health broke down toward the end of 1878.

He left England for New Zealand in search of health. As will be seen, he found it subsequently not only for himself but for the whole community of New South Wales. His stay in New Zealand was but short, for chance led him to follow for a time an open-air life travelling about the Commonwealth of Australia. The wonderful healing qualities of the Australian climate soon made a new man of him, and, during the 28 years of his professional activity in Sydney, he never ceased to be grateful to Australia for his regained health.

In 1883 he was sent by the Government to Mackay, to investigate the epidemic of dengue prevalent at that time. In 1884 he returned to Sydney and obtained, through the offices of Dr. (now Sir Charles) Mackellar, the position of temporary medical officer to the Board of Health. Dr. Thompson's duties at that period were confined to measures adopted to cope with an outbreak of variola. He was successful in this respect, and in the following year he was appointed Chief Medical Inspector to the Board of Health, and Deputy Medical adviser to the Government of New South Wales. The Board of Health at that time was accommodated in a private house in Macquarie Street, near the Chief Secretary's Office. During the early days of his administration, his official duties were restricted by the fact that no Public Health Acts were in existence. Outside the Department itself there was scarcely a properly qualified sanitary officer. The City Council was served by untrained inspectors of nuisances, whose duties included the collection of rates. Dr. Thompson often expressed the opinion that there was no public health service at the time in Australia. One of his largest undertakings was the creation of a real Department of Public Health. In 1896 he was elected Chief Medical Officer to the Government and President of the Board of Health. Immediately after his appointment he threw himself energetically into the work of reorganizing his own staff. He prevailed on various local bodies to employ educated and trained officers. In his own department, all his medical associates had to be specially qualified in hygiene, and to possess the diploma of Public Health or some equivalent qualification. He himself had taken his D.P.H. at the Cambridge University, in 1882. Among the other positions to which he was appointed were those of Medical Officer of Health for Sydney and the Newcastle districts, and Chairman of the New South Wales Committee of the Royal Sanitary Institute of Great Britain. In connexion with this last named body, it may be pointed out that he was the means of securing the certificate of the Institute to a number of individuals who afterwards occupied municipal sanitary positions. He turned his attention to the work of the public health officers, and in this way effected a considerable reform in the hygiene of Sydney.

He undertook at various periods an enquiry into the causes of infective diseases occurring in epidemic form. In this work he was peculiarly successful, and rarely failed to institute measures to control these outbreaks.

Dr. Thompson took a very active part in the production of the Public Health Act, and a large number of the regulations under the Act were drafted by him. The Dairies Supervision Act and the Pure Foods Act were passed in response to recommendations made by him. In his adminis-

trative capacity he made full use of the legal provisions of these and other hygienic measures.

He served on several commissions, the most important of which were the Lead Poisoning Enquiry Board (Broken Hill), of which he was chairman, and the Royal Commission appointed to enquire into the conditions of the food supply. In regard to the former, lead poisoning was extremely common among the miners and smelters employed in the silver and lead mines in the Broken Hill district. The result of the enquiry was the recognition of the manner in which the poisoning occurred, and the introduction of safeguards.

He was one of the greatest authorities on leprosy, and his work in connexion with this disease has commanded recognition throughout the world. His administration of the Leprosy Act, his management of the State Lazaret, and his knowledge of the history of this disease were alike remarkable. In 1898 he obtained a prize offered by the National Leprosy Fund of Great Britain for the best history of leprosy. Few, if any, men in Australia had a more

thorough knowledge in regard to small-pox and its prevention. He appears to have had a rare instinct, enabling him to diagnose this disease in its most aberrant forms. He also contributed to the knowledge possessed in connexion with plague, and the fact that he was asked to write a description of this disease for Gould and Pyle's *Cyclopædia of Medicine, U.S.A.*, is evidence that he was recognized as one of the first authorities. He delivered an address on plague at the 1906 meeting of the American Medical Association at Boston, and his epidemiological accounts of plague in Sydney from the year 1900 to the year 1907 belong to the classical literature of this disease. It has been said that his prize essay on leprosy in Australia forms a stimulating example of how such a subject may be treated, and that his official reports on the same subject are replete with carefully collected and arranged facts, and illuminating comments. From 1890 to 1898 he was Examiner in Public Health at the University of Sydney, and from the year 1900 he occupied the post of Chairman of the Local Board of Examiners for certificates of the Royal Sanitary Institute.

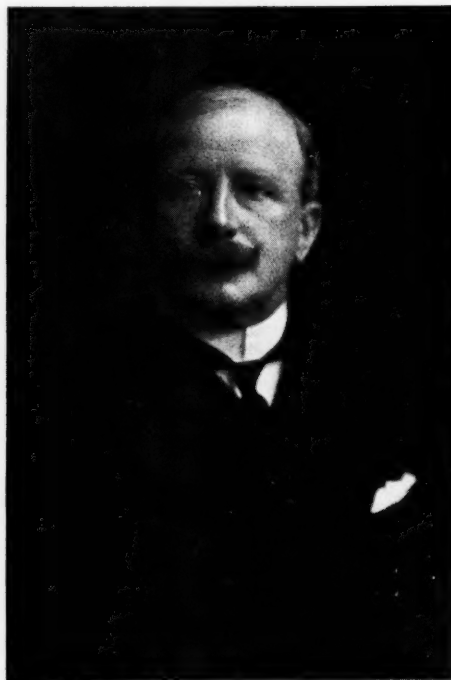
Dr. Ashburton Thompson threw his whole energies into every task he undertook. He was a just man, and was extremely reticent and cautious in his expression of opinion. He commanded respect and admiration, and it may be said of him that the community was the better for his existence. That he was not very popular among some of his colleagues was due to the fact that they did not understand him, and that it was not in his nature to disclose his inmost self to his acquaintances. Those who knew him intimately found in him a courteous gentlemen and a good friend.

He married the eldest daughter of Sir Julian Salomons, K.C. His stepson, Lieutenant Bryan Simpson, was recently killed at the front.

JAMES JACKSON.

Late in August the medical profession sustained a severe loss in the death of Dr. James Jackson, in his 75th year. Few men have applied themselves more assiduously to the practice of their profession than did Dr. Jackson, and few have given their patients the benefit of a prolonged and valuable experience up to a few days of their death.

Dr. James Jackson was a London student. In 1861 he obtained the diploma of the membership of the Royal



College of Surgeons; in 1863 he took his degree at the London University, and three years later he passed his M.D. examination. On his arrival in Victoria he obtained an *ad eundem gradum* degree at the Melbourne University. He was probably the first medical man to practise ophthalmology in the Commonwealth. He was certainly the first in Victoria. During the 47 years since his arrival in Australia he addressed himself wholly to private practice, and without having held a senior office at any hospital, he gained a great reputation as an ophthalmic surgeon. It has been said of him that he held a position in ophthalmology comparable to that held by the late Sir Thomas Fitzgerald in general surgery. He exercised an immense influence over his patients, and was held in the highest esteem throughout Melbourne and the whole State of Victoria. His honesty of purpose, his intense hatred of all forms of practice savouring of charlatanry, and his high ideal of the dignity of his calling were characteristic features of the man. He was of a retiring disposition, and always shunned the limelight of publicity.

His medical education had been based on broad and liberal lines, and his practice was signalized by an eminently scientific trend. His experience of trachoma was probably greater than that of any other ophthalmologist in Australia. In the majority of trachoma cases he performed canthotomy, peritomy, expression of the follicle and friction with a cotton wool wad, wound round a probe, and soaked in perchloride of mercury. He obtained excellent results in pannus, and in several other conditions he practised forms of treatment which were peculiarly his own.

In private life he was a charming companion, and an excellent host. Those who have been associated with him through long years knew the value of his friendship, and appreciated the worth of a noble-minded man.

KEITH MAURICE LEVI.

Captain Keith M. Levi, who was killed in action at the Dardanelles, on August 7, 1915, was the youngest son of Joseph Levi, formerly of Lullighi, Princes Street, St. Kilda. He was in his twenty-fifth year. He was educated at Cumloden and Melbourne Church of England Grammar School, afterwards proceeding to the Melbourne University. He was a student at Ormond College, and he took his degree in April, 1914. Whilst at the University he took great interest in the Sports Union, and was for some time Captain of B grade hockey team, and played in inter-varsity matches. He was also a member of the University Rifles.

After graduating in medicine he was appointed a Resident Medical Officer at the Melbourne Hospital, and later he joined the staff of the Perth Public Hospital.

Volunteering for active service on the third day after war was declared, he served as Medical Officer at Blackboy Camp, Western Australia, and afterwards at the Broadmeadows Camp. He left Victoria on February 6 for Egypt, with the Light Horse reinforcements, and was stationed at the First Australian General Hospital, Heliopolis, for two months. Proceeding thence to the Dardanelles he was for a time on hospital ships bringing wounded back from Lemnos to Alexandria.

He was sent to organise a rest camp on the Island of Imbros, and it was from there, on June 29, he was ordered to Cape Hellas, and attached to the 2nd Hampshire Regiment, 29th Division, as Regimental Medical Officer.

Letters from him show that he went right into the trenches, and in attending to the wounded did not hesitate to expose himself to the enemy's fire.

The following is a letter addressed to Mr. Joseph Levi, the father of the late Captain Keith Levi, by Major J. G. Bell, R.A.M.C., Acting Director of Medical Services, 29th Division:—

I am writing to you about your son's death. Being separated as he was from his own Australian troops, it is possible that no one else may write you any particulars. He joined this Division (29th), and was placed in medical charge of the 2nd Hampshire Regiment. This suited him; he liked his work, and became most popular with the regiment. He was one of the best Regimental Medical Officers in the Division. On the

6th of this month the brigade to which his regiment belonged became engaged, and suffered severe casualties. He worked splendidly just behind the firing line all that afternoon and all night, getting back the wounded, dressing and attending to them. At about 6.30 on the morning of the 7th, when his work was practically over, and he was standing with another officer, a Turkish shrapnel shell fell close to him, killing him dead, together with some five other men. He is buried where he fell, next to a captain of the Hants., with two officers of the Essex Regt. close by. He is buried in an open nullah. I saw his grave this morning, and a suitable cross is being put up this afternoon by the Regiment.

His small personal belongings have been sent to you by registered post.

Your son's death is a great loss; he took such an interest in his work, was so keen about it, and had done so well.

Please accept my sincerest sympathy.

Yours sincerely,

J. G. BELL, Major R.A.M.C.,

Headquarters, 10/8/3.

A.D.M.S., 29th Division.

Correspondence.

HOSPITALS, NURSES AND MEDICAL OFFICERS.

Sir,—I would like to have an answer to the following queries:—

(i.) Is a nurse of the Association qualified, or allowed to prescribe, and to dispense medicines for patients?

(ii.) Is she qualified to set fractures, and subsequently to throw the onus on a medical man?

(iii.) Is the Committee of the Hospital justified in refusing to pay the ordinary fee after the nurse has set a fracture herself?

(iv.) Is it usual in Australia for the Medical Officer of a Hospital to pay for any small items he has for his own personal use? Should the charge, if any, for the items be four times the cost?

Yours, etc.,

September 9, 1915.

SURGEON.

(i.) No nurse is qualified to prescribe medicines for patients. Where a medical man is not available, as in out-back districts, nurses are given certain drugs, such as aperients, and at times tincture of opium, in case of emergencies. In regard to opium, it is usual for the nurse to telephone to a doctor before administering a dose. Under ordinary conditions of practice a nurse should neither prescribe treatment nor dispense medicines.

(ii.) No nurse is qualified to set fractures save in an emergency, when the nurse carries out first aid. If a fracture be put up by a nurse, the surgeon will invariably take off the bandages and satisfy himself that the fragments are in good position. We fail to understand how a nurse could throw the responsibility of the treatment of a patient on a medical man. The medical man in attendance must satisfy himself that the correct treatment has been applied, and even when the nurse has carried out first aid, she does not bear any responsibility.

(iii.) When the Committee of a Hospital undertakes to pay medical practitioners for treatment carried out in the hospital, the payment must be made even when the nurse has instituted the first portion of the treatment. We presume that our correspondent refers to the refusal on the part of the Committee to pay the ordinary fee for the treatment of a fracture in a case in which the nurse has applied a splint. The fact that the nurse has exceeded her duty does not, in our opinion, relieve the doctor of his responsibility. If the doctor adopted means to ensure that the limb was in a satisfactory position, and if he conducted the rest of the treatment in a proper manner, he should receive the usual fees.

(iv.) It is not quite clear what small items are referred to in the fourth question. As far as we are aware it is distinctly unreasonable for the hospital authorities to require payment from medical officers for any commodities supplied by them to him. The latter part of the question conveys the impression that the Hospital Committee is

attempting to make a large profit out of purchases made by its own officer. This action would certainly be highly undesirable. We have yet to learn of an instance.

Proceedings of the Australasian Medical Boards.

THE NEW SOUTH WALES MEDICAL BOARD.

Disciplinary Case.

The New South Wales Medical Board dealt, on August 31, 1915, with the case of Dr. Natalie Sisca, who was required to answer the charge of improper conduct. Sir Phillip Sydney Jones, the Chairman of the Board presided, and Drs. Odillo Maher, G. Hurst, R. H. Todd and G. H. Abbott were present.

The case against Dr. Sisca depended on the allegation that he had acted as medical superintendent of the Ladies' College of Health, an institution which carried out medical treatment and advertised largely, and that he had used appliances and drugs the advertisement of which had been prohibited by an Order-in-Council. Dr. Sisca pleaded not guilty to the charge of infamous conduct in a professional respect. He made the following admissions: He was aware of the prohibition of the appliances and drugs used in connexion with the Ladies' College of Health and of the fact that the Ladies' College of Health had systematically advertised their business; he had acted as Medical Superintendent at the Ladies' College of Health.

Dr. Ralph Worrall gave evidence concerning the Ladies' College of Health and the treatment used by this institution. In regard to the Orange Lily treatment, he confirmed the opinion that the business carried on by the firm was false and misleading, and a fraud, and that the use of the Orange Lily suppository was injurious to those using it. He repeated the salient points of his evidence given before Judge Murray when the business of the firm was the subject of enquiry. He stigmatized a number of statements published in a pamphlet entitled "The Women's Guide to Health" as absolute falsehoods. Some of the advice contained in the publication was, in his opinion, injurious both from a physical and from a moral point of view.

Turning to the consultation form and slip attached, marked "private and confidential," Dr. Worrall stated that it was simply dishonest to try to lead patients to believe that a correct diagnosis could be arrived at from a consideration of symptoms alone. It was an imposture. A due amount of attention should be paid to the patient's history, but this should never outweigh the results of careful examination. Patients at times mislead the physician wilfully, and more frequently they exaggerated their symptoms.

Dr. Sisca was asked whether he wished to ask Dr. Worrall any questions. He replied that he had nothing to do with the book, which he regarded as a tissue of stupidity.

Mr. Arthur Kench, Chief Inspector under the Pure Food Act, 1908, gave evidence of the circumstances of certain visits made by him to the Ladies' College of Health. On March 24, 1914, he called at the premises in Oxford Street, Sydney, and saw the late Mr. Alexander, who was Manager at the time. Mr. Garling was Assistant Manager. He discovered that about 18 persons, including three trained nurses, were employed by the firm. Mr. Alexander admitted that the "College" recommended the Orange Lily suppositories, the "serrate massage treatment," the "uterine tonic," the "golden specific kidney and liver pills," and a herbal tonic. He seized samples of these nostrums. He also asked for and received specimens of "the results of the treatment," in the form of material which had come away from the vagina of the patients. On March 3, 1915, he again visited the "College." In addition to the former advertisements posted outside the building, there was a large brass plate bearing the inscription "Under medical supervision." He saw Mr. Alexander, Mr. Garling and Dr. Sisca. Dr. Sisca admitted to him that he was the Medical Superintendent of the Ladies' College of Health. He stated that he recommended Orange Lily suppositories to patients. The suppositories were at that time for sale. In the dis-

pensary he found some other suppositories, which Dr. Sisca explained were suppositories with which he was experimenting. Dr. Sisca told him that he interviewed patients who wished to see him. On May 31, 1915, he again visited the College of Health, and on this occasion he asked Dr. Sisca whether he was employed as Medical Superintendent at a salary of £500 a year. Dr. Sisca replied in the affirmative. Dr. Sisca admitted that no fee was charged for a consultation. In reply to his questions, Dr. Sisca had told him that patients in the country filled in a consultation form; the answers to the questions were examined by Dr. Sisca and the drugs deemed necessary recommended. Witness selected 13 used consultations forms haphazard. For 12 out of the 13 patients Dr. Sisca had recommended suppositories. Dr. Sisca acknowledged that he ordered the suppositories in all cases of uterine trouble. Dr. Sisca had informed him that all the drugs mentioned above were supplied by the College of Health under his supervision and direction. His attention was called to the fact that the majority of them had been prohibited, but Dr. Sisca had replied that he was prepared to defend his position.

Dr. Sisca cross-examined the witness. He asked whether he had not stated on the occasion of the last visit that if witness could show him that he was doing anything illegal he would put on his hat and step out of the place. The witness replied that he (Dr. Sisca) had asked him some point of law, which covered the matter referred to. In reply to the question: "Do you really remember that I told you that I could defend this?" Mr. Kench said that the words used were "My visit here this morning is rather a serious one." Later, he had said that the position was a serious one, not only for him as a professional man, but also for the Ladies' College of Health, seeing that the goods referred to had been prohibited.

Dr. Cooksey, Government Analyst, gave evidence to the effect that the Orange Lily suppositories analysed by him contained borax, alum and opium. In the first one analysed, the quantities of borax found were 29% and in the second 13%; the quantity of alum was 26% and 12%, while only a small quantity of opium was contained in each. Mr. Sydney Gilbert Walton, the Chief Assistant Government Analyst, deposed to having examined the suppositories with which Dr. Sisca had been experimenting. They contained boric acid, zinc sulphate, and some vegetable matter containing a small amount of an unidentified alkaloid.

Dr. Arthur A. Palmer, First Government Medical Officer, gave evidence in regard to the therapeutic action of the drugs employed. He expressed the opinion that the treatment as carried out at the Ladies' College of Health with the use of the consultation forms was mere quackery and charlatanry.

Dr. J. B. Cleland, Principal Government Microbiologist, gave evidence of the nature of the material handed to Mr. Kench as specimens of what had come away from the vagina of the patients.

Dr. Sisca opened his defence in the following manner:—

"My position is this: I accepted the position of Medical Superintendent of this institution, and I simply wish to say that I did it under stress of painful circumstances. I do not wish to cast any reflection upon the people who have been running this business under any consideration whatever. But so far as I, myself, am concerned, I must submit to the Board that I have been battling with ill-health for the last 11 years. I do not want to parade my infirmities, lest I may be suspected of wishing to make a show of them in order to enlist compassion and sympathy. But I can say that for 11 years I have been absolutely prevented from engaging in private practice, on account of my utter inability to do night work, a bad chest, a deep trouble in my throat, and failing eyesight, with prospective total blindness in the more or less near future. Under these circumstances, the temptation of an easy appointment was a counsellor very easily listened to. With regard to the legality of my position, I can say that I am not aware of having done anything against the law. I have not prescribed or recommended the remedies which were prohibited, since the prohibition became known. As a matter of fact, when I entered into negotiations with these people, I made them understand that

I was very reluctant to touch these remedies at all, chiefly because I did not know what they were made of. Since these remedies have been prohibited, I tried to substitute other things for them. I substituted a liquid medicine for what had been called the capsule or suppository, and that met with the approval of very many patients. After several attempts, I used suppositories that were got from a drug firm, one of the chief drug firms in Sydney, and later on I gave a prescription for another suppository, which is being manufactured here. I was not aware that I was doing anything wrong. I could not say that it was similar to the other, because I did not know what the other was made of. I simply gave a formula myself, a formula which I knew and believed to be perfectly harmless. So far as other remedies were concerned, I never touched them since they have been prohibited. I substituted things according to my own formula and prescription, that could not possibly do any harm, and would do good.

"With regard to my having prescribed for patients at a distance, on the strength of this form, I thought that the symptoms, which are detailed, and the questions which are asked in a form like this, were quite sufficient to justify me in forming an opinion as to what would be the position of the patient. Whenever there was any sign whatever of the patient being in anything like a critical condition, anything like a tumour or that kind of thing, I declined to have anything to do with it, and advised the patient to resort to her own local doctor.

"There is another thing that I might have asked Mr. Kench when he was here. That is, that I never recommended suppositories to young girls, chiefly on the principle that I do not believe in it. I do not think it is right to do so. Before I entered the position of Medical Superintendent in this place, I spoke to the Manager and to Mr. Alexander, and told them that it would be very undesirable to recommend the use of anything like a suppository in the case of young girls, on moral grounds, as well as physical and mechanical grounds.

"In regard to my having been made use of in order to shield lay people, I was not aware that I was doing anything against the law, because these people did not call themselves doctors. I did not think I was committing any illegal act. I was practising there just as I would have practised in a place of my own. It never dawned on me that I was acting against the law, and that is what prompted me to ask Mr. Kench that if he could show me I was doing anything illegal I would simply step out of the place. I might say that after the proclamation was issued by the Governor I went and took Counsel's advice, the advice of a well-known man in the profession. I asked him whether my position had anything illegal in it, and he said No. I can prove that I did so."

In cross-examination, Dr. Sisca stated that he had taken Mr. Shand's opinion. He had gone to Mr. Cohen. Both Mr. Shand and Mr. Cohen had appeared for the Ladies' College of Health before Judge Murray. He did not pay for the opinion. He admitted that he drew up the consultation form. He disagreed with the suggestion that it was charlatany to attempt to diagnose a condition without seeing the patient. He admitted that he did not see the great majority of the patients.

Questioned as to the suppositories, he maintained that they would not do harm and would do good. He could not help if this opinion was in complete disagreement with that expressed by Dr. Worrall, Dr. Palmer and Dr. Cleland. He suggested that the suppositories acted as an astringent. Questioned in connexion with the consultation form, he held the opinion that the colour of the urine was of diagnostic importance.

He admitted that he was aware that the Ladies' College of Health advertised their remedies. The firm also advertised the medical superintendent. He was further questioned in regard to how he got into touch with this institution. He stated that a medical agent, named Mr. Loxton, told him that the appointment was available, that it was an institu-

tion for the treatment of female patients, and that there was no night work. He told Dr. Sisca that the remuneration was £500 a year. The witness could not remember the month when he saw Mr. Loxton. It might have been somewhere about November, October or December. He did not recollect that that time was about the date of the hearing before Judge Murray. He learned of the result of the hearing after he had entered on his duties.

He was forced to admit that he prescribed systematically on the strength of the form for patients in the country. He realized that he had allowed himself to be associated with a firm which advertised its business. Dr. Sisca then stated that he admitted that; he admitted that he was absolutely wrong; he had no excuse to offer. He had intended to be represented by Counsel, but changed his mind because he recognized that his position from an ethical and professional point of view was indefensible, and he did not want to engage anyone to come to the Board and tell them that he had done right. Dr. Sisca was pressed to reply to the question whether he had aided and assisted the Ladies' College of Health to carry on an advertising business. He resisted these questions, and then appealed to the Board. He said that he understood that it was Mr. Bathgate's business to make his position as dark as he could, but he wanted to make it as light as he could. He wanted to throw himself on the clemency of the Board.

The cross-examination was continued by the President and members of the Board. To the President, he admitted that his suppository was composed of about 6 grains of alum, 10 grains of boric acid, a little hydrastis root, a little horse-chestnut bark, and about half of a grain of opium. It was pointed out that the only new constituents were hydrastis and chestnut. To Dr. Odillo Maher, he stated that he had used the suppository when there was chronic inflammation, and especially in leucorrhoea, or want of tone. He maintained that the first effect was a soothing one, due to the opium. Next there was a visible diminution of the discharges. The patients felt that they could move about more easily, and do their work better. On a few occasions patients reported that shreds of membrane had come away. He would not expect epithellum to come away after the insertion of 6 grains of alum and 10 grains of boric acid in a confined space like the vagina. He prescribed the suppository for its astringent effect on the mucous membrane of the vagina. He did not want to get any action on the uterus. Dr. Sisca asserted, in reply to Dr. Hurst, that he had used vaginal pessaries medicated with glycerine and alum for years in his private practice. He had never heard of any untoward effect. He had left the institution a week before, having sent in his resignation a fortnight before. He had done this because he did not want to have anything more to do with the place.

The Board then retired to consider its decision, and on returning into the Board-room, the President said:—

"Dr. Sisca, the Board regret that they have no other course, on the evidence before them, but to adjudge you guilty of infamous conduct in a professional respect, and that being the case, they will now give directions to have your name removed from the roll of duly qualified medical practitioners."

The following have been registered under the provisions of the "Medical Act of 1912" as duly qualified medical practitioners:—

Wigmore, Arthur William, L.R.C.P., Lond., 1887; D.P.H., R. Coll. Phys. Lond. et R. Coll. Surg., Eng., 1895.

Mackechnie, Charles Alexander, M.B., C.M., 1885, Univ. Glasg.

For additional registration:—

Hair, James Manning, Mast. Surg., 1915, Univ. Sydney.

Bateman, John Edwin, Mast. Surg., 1915, Univ. Sydney.

QUEENSLAND.

The following have been registered under the provisions of the "Medical Act of 1867" as duly qualified medical practitioners:—

Thorpe, James Herbert, Toowoomba, M.B., Ch.M., 1880, Univ. Edin.

Travers, Otho Boyle, Thursday Island, M.B., Ch.B., 1904, Univ. Durh.

Additional Registration.

Smith, Eric McLeod, Bundaberg, M.D., 1912, Univ. Oxon.

Medical Appointments.

Dr. A. E. Gibbes has been appointed Government Medical Officer at Lithgow, New South Wales, in place of the late Dr. H. Kirkland.

Dr. F. A. Rodway has been appointed Government Medical Officer, at Nowra, New South Wales.

Dr. W. A. Dunn has been appointed Honorary Aurist to the Rookwood State Hospital and Asylum at Lidcombe, New South Wales.

Dr. J. Gregg has been appointed Officer of Health for the whole of the North Riding of the Karkaroc Shire, Victoria.

Dr. Mary Mitchell has been appointed Officer of Health for the Leigh Shire, Victoria, in place of Dr. F. L. Read, resigned.

Dr. F. Green has been appointed Acting Officer of Health for the Arawata and Korumburra Ridings of the Poowong and Jeetho Shire, Victoria.

Dr. R. N. Wawn has been appointed Officer of Health of the City of Prahran, Victoria, during the absence of Dr. R. H. Fetherston.

Dr. F. J. Owen has been appointed Officer of Health of the M'lvor Shire, Victoria, in place of Dr. C. J. Simpson, resigned.

Dr. C. Harcourt has been appointed Officer of Health for the Rodney Shire, Victoria, during the absence of Dr. M. A. Ley.

The following have been appointed Officers under the Immigration Act, 1901-1912:—

South Australia: Port Adelaide—Dr. P. T. Cherry, *vice* Dr. W. J. Gething (deceased).

Northern Territory: Darwin—Dr. T. Wilson, *vice* Dr. F. Howson (resigned).

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, locum tenentes sought, etc., see "Advertiser," page ix.

Brisbane Hospital, Resident Medical Officers.
Thargomindah Hospital, Queensland, Medical Officer.
Hampden District Hospital, Friezland, Queensland, Resident Medical Officer.

Diary for the Month.

Sept. 28.—N.S.W. Organization and Science Committee; Medical Politics Committee.

Sept. 28.—Vict. Branch, B.M.A., Eye and Ear Section.

Sept. 29.—Vict. Branch, B.M.A., Council.

Sept. 30.—Vict. Branch, B.M.A., Election of two members Federal Committee.

Sept. 30.—South Aust. Branch, B.M.A., Monthly.

Oct. 1 and 2.—N.S.W. Branch, B.M.A., Annual Meeting (1915) of Delegates of Local Associations of Members with the Council.

Oct. 1.—Q. Branch, B.M.A., Monthly.

Oct. 5.—N.S.W. Branch, B.M.A., Council. (Quarterly).

Oct. 6.—Vic. Branch, B.M.A., Monthly.

Oct. 8.—N.S.W. Branch, B.M.A., Clinical.

Oct. 8.—S. Aust. Branch, B.M.A., Council.

Oct. 12.—Tas. Branch, B.M.A., Monthly and Council.

Oct. 13.—Melb. Pediatric Society.

Oct. 14.—West. Med. Assoc. (Wellington), N.S.W.

Oct. 14.—Vic. Branch, B.M.A., Council.

Oct. 15.—East. Sub. Med. Assoc.

Oct. 19.—N.S.W. Branch, B.M.A., Executive and Finance Committee; Ethics Committee.

Oct. 20.—Vic. Branch, B.M.A., Clinical.

Oct. 20.—W. Aust. Branch, B.M.A., General.

Oct. 22.—Q. Branch, B.M.A., Council.

Covers for binding *The Medical Journal of Australia* for Vol. I, 1915, can be obtained on application to the Manager, B.M.A. Building, 30-34 Elizabeth Street, Sydney. The price of a cloth cover is 2s., and of half leather 3s. 6d.; postage, 7d.

Important Notice.

Medical practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429 Strand, London, W.C.

Branch.**APPOINTMENTS.****QUEENSLAND.**

(Hon. Sec. B.M.A. Building, Adelaide Street, Brisbane).

Brisbane United F.S. Institute.

WESTERN AUSTRALIA.

(Hon. Sec. 230 St. George's Terrace, Perth).

Swan District Medical Officer.
All Contract Practice Appointments in W.A.

Australian Natives Association.
Balmain United F.S. Dispensary.
Burwood District F.S. Institute.
Canterbury United F.S. Dispensary.
Goulburn F.S. Association.
Leichhardt and Petersham Dispensary.

M.U. Oddfellows Med. Inst., Elizabeth Street, Sydney.

Marrickville United Friendly Societies' Dispensary.

Mullumbimby District Friendly Societies.

N.S.W. Ambulance Association and Transport Brigade.

N. Sydney United F.S.

People's Prudential Benefit Society.
Phoenix Mutual Provident Society.

F.S. Lodges at Braidwood.

F.S. Lodges at Casino.

F.S. Lodges at Lithgow.

F.S. Lodges at Mudgee.

F.S. Lodges at Orange.

F.S. Lodges at Parramatta, Penrith, and Auburn.

F.S. Lodges at Wellington.

Newcastle Collieries—

Killingworth.

Seaham Nos. 1 and 2.

West Wallsend.

NEW SOUTH WALES.

(Hon. Sec. 30-34 Elizabeth Street, Sydney).

SOUTH AUSTRALIA.

(Hon. Sec. 3 North Terrace, Adelaide).

The F.S. Medical Assoc. Incorp., Adelaide.

EDITORIAL NOTICES.

Manuscripts forwarded to the office of this Journal cannot under any circumstances be returned.

Original articles forwarded for publication are understood to be offered to *The Medical Journal of Australia* alone, unless the contrary be stated.

All communications should be addressed to "The Editor," *The Medical Journal of Australia*, B.M.A. Building, 30-34 Elizabeth Street, Sydney, New South Wales.

The Librarian of the New South Wales Branch has called our attention to the fact that the following issues of the *Lancet* have been borrowed some time ago, and have not yet been returned. The member who has these copies in his possession is respectfully requested to return the same as soon as possible. In order that the volume may be bound: January 2, 9, 16, 23, 30, February 6, 13, 20, April 24, and May 29.

The Librarian of the Victorian Branch will be pleased if any member possessing spare copies of the following journals will present them to the library, in order to complete the sets:—

Lancet, October 3, 1914, April 10, 1915, and subsequent numbers.

Practitioner, September to December, 1914, January and February, 1915.